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CHARACTERISTICS AND USES OF PRACTICE EXERCISES IN READING

By ARTHUR I. GATES
Professor of Education, Teachers College

DURING the past twenty years important advances have been made in the development and application of practice exercises in the fundamental subjects. To this improvement contributions have been made by both educationists and experimental psychologists. The former have made contributions by means of criticism of the older educational method termed "drill"; the latter by technical studies of a newer method termed "practice exercise" or "practice experiment."

So severe and long continued have been the attacks upon "old-fashioned drill" that the term has come to be odious to many teachers. The use of oral drill-methods and oral recitations was properly criticized as exacting and nerve-racking, a mass procedure poorly adapted to individual differences and humiliating to the less able pupils. These methods were attacked because they were usually time-wasting, for both pupil and teacher, and because they were usually conducted so as not to stimulate the higher mental processes of judging, reasoning, and applying principles. Frequently drill was employed when wide reading, problems, projects, experiments, and discussions would have been more educative. The method often resulted in memorizing of materials of trivial and uninteresting character arranged in such

barren form as to discourage understanding and application to realistic situations.

At the same time a form of learning known as the practice experiment was being studied in the psychological laboratories with promising results. It was demonstrated that for purposes of developing high degrees of proficiency in speed, accuracy, facility, and definiteness or precision of response, the practice exercise was the most efficient device yet invented. The practice exercise as used in the laboratory, however, differed in many respects from the conventional school drill. It comprised several essential features, largely or wholly neglected in the typical schoolroom drill. It required that the material be selected and arranged so as to induce the learner to make the desired response. If the reaction should include judgment or problem-solving or application of principles, the material should be set up so as naturally and necessarily to exercise the process. The method involved careful determination of the optimum length of the practice period and the optimum distribution of reviews. It stipulated the use of objective methods of scoring achievement in each practice period so that the pupil could promptly determine his own successes and failures and become aware of his progress. Proponents of the method suggested the value of an organization that would enable the learner to manage his own practice, score his own progress, and diagnose his own difficulties. Although the practice exercise thus developed was, like drill, a direct method of learning, it differed from drill in many respects.

The early adaptations of the practice exercise to the purposes of the school, as a substitute for drill, revealed the rapidity with which it enabled children to learn, but they disclosed certain defects. The most conspicuous defect was the narrowness and barrenness of the content of the exercises. This deficiency is apparent in most of the first practice exercises in arithmetic, spelling, reading, language, and other subjects. A second defect was the tendency to isolate the practice exercise from other activities—from such educative follow-up activities as discussion, problem-solving, further reading, and various artistic, dramatic, constructive, and exploratory projects. A third defect was the almost universal emphasis upon improvement in the *speed* of performance. This emphasis not only tended to make the exercises unduly exacting and exciting, but frequently led to the neglect

of development of accuracy, fullness, breadth, and other characteristics of performance.

Although it has a history of misuse, the practice exercise contains certain characteristics that deserve application to school use. Those features which enable children and adults to achieve a desirable type of proficiency with more ease, speed, and certainty than any other known methods should be divorced from their undesirable relatives, and associated with more friendly and educative companions. It will be the purpose of this article to suggest certain usages that may be made of the practice exercise method in reading.

Although the materials and procedures suggested are the outcome of considerable research extending over several years, the purpose of this article will be to describe the materials and methods rather than to present the validating data. Merely the general character of the investigations may be suggested.

I. DISTINCTIVE TYPES OF READING

One series of studies was conducted to determine what type of reading reactions were most important for general use and most distinctive in character. These studies led to the selection of four types of reading as follows:

A. *Reading to comprehend merely the general significance or main idea of a passage.* This is a type which is frequently employed in reading poems, narratives, newspaper accounts, and other materials, when exhaustive understanding and permanent retention of the details are not required. It is a casual type of reading.

B. *Reading to predict the outcome of given events or to anticipate the outcome of the situation described.* In this type of reading it is necessary to do more than merely understand what is definitely given in the passage; it is essential also to apply or to relate the given facts to an issue or a problem. This form of reading requires a type of thinking or imagination not essential to mere comprehension, which is sufficient in the first type.

C. *Reading to understand and execute precise directions.* In this type of reading, it is necessary to do more than grasp the general significance of a passage; it is necessary also to understand and to recall a series of related items. While it is not necessary to use the given data to predict other events, it is essential to understand the

material with exactness and precision. This is the type of exact reading required to carry out correctly innumerable types of instructions and directions encountered in texts, manuals, orders, and assignments in scholastic, social, and business life.

D. *Reading to understand significant details.* This type of reading requires a better grasp of details than is required in Type A but a different management of them from that demanded in Types B and C. Here the reader is required to exercise a selective rather than merely a full understanding. He is required to choose those details, from the many given, which are significant for a given purpose. The purpose is stipulated in a problem, question, or exercise accompanying the passage.

These four types of reading appeared, in the results of investigations, to be distinctive in character and of outstanding importance as useful reading tools. That they were distinctive in character was shown by the fact that a pupil could be appreciably more proficient in one or more types than in the others. While there is much in common among the four varieties, proficiency in each depends in some measure upon distinctive techniques. And these techniques, it was found, may be acquired by means of properly supervised experience.

II. DESCRIPTION OF THE PRACTICE EXERCISES IN READING

The first professional instrument based on these findings to be offered for general use was the Gates Silent Reading Tests for Grades 3 to 8, announced in THE RECORD for September 1926. This team provided a short test of proficiency for each of the four types of reading ability. Both before and after the tests were published, studies were made of various kinds of remedial and practice materials for use in improving the reading abilities measured by the tests. From the many kinds of material tried out upon individuals revealing different degrees and types of deficiencies and upon whole classes in need of more or less intensive training, four sets of practice exercises, one for each type of reading, have been developed and are now being made available for general use by the Bureau of Publications of Teachers College.

At the present time, four sets of the Practice Exercises, containing materials of approximately third grade level of complexity, have been published. These sets may be used with superior second grade pupils

as well as with third grade children. For many purposes, such as developing speed or accuracy in reading rather easy material, they are also suitable for use in higher grades. A second team of four sets adjusted approximately to average fourth grade level is in press and materials for higher levels are in preparation.

Each of the four sets at each level consists of sixty-two pages in the form of a booklet. Each booklet contains enough material to push proficiency to a high level in all save exceptional cases. The materials have been carefully prepared and tested with respect to intelligibility and authenticity of content, and suitability in vocabulary, interest, typography, and composition. The illustrations in Set C will appeal to children. The content, as recommended in the latest Report of the National Committee on Reading, includes both narrative and informative types of material and both work and play types of comprehension purposes. In order to stimulate interest and to provide incentives for follow-up reading and other activities in different directions, the topics introduced in each booklet are numerous. Fun and humor; biography and travel; bird, animal, and plant life; science, industry, social life, customs, legends, mystery, and other themes are included. In general, the content is designed to be interesting and educative, in the broader sense, as well as suited to the purpose of cultivating a specialized type of reading technique. Sample pages from each of the four booklets of the third grade level are reproduced on pages 226 and 227.

III. ADAPTING THE MATERIALS TO FOSTER SPEED, ACCURACY, OR FULLNESS OF COMPREHENSION

Investigations have shown that even in one type of reading, such as reading to comprehend significant details, a pupil may be not merely weak in general but comparatively deficient in speed, accuracy, fullness or depth of comprehension. For example, a child, although his comprehension is highly accurate and thorough, may read slowly and laboriously. He may be reading with unnecessary thoroughness for the purpose at hand, or he may be so deficient in the techniques essential to fluent reading as to be unable to progress rapidly. For such a pupil, the Practice Exercises provide the means of discovering and remedying the causes of the difficulty and of developing and habituating a more rapid rate of reading.

Type A Sample Pages Type B

25.

"My dress is white as snow," said Mary.

"It *was* a snowball, not long ago," answered her Mother.

"An icy snowball?" asked Mary, laughing.

"No," said Mother, "a cotton snowball. The cotton in your dress grew in fat, green pods on a plant. When these pods burst open, the cotton plant was covered with lovely white snowballs.

"People picked the cotton and it was cleaned by a machine called the 'cotton gin'. Then it was sent to the mill to be spun into thread and woven into cloth for your dress."

"How wonderful!" cried Mary. "I shall call this my 'snowball dress'."

1. What is this story about?
   (a) How the cotton gin cleans cotton.
   (b) How cloth for cotton dresses is made.
   (c) Why Eskimos wear snowball clothes.

2. How did Mary feel about her dress?
   (a) Cross; (b) Sad; (c) Proud; (d) Angry.

3. Choose the best title for this story.
   (a) The Cotton Gin.
   (b) A Snowball Dress.
   (c) Throwing Snowballs.

22. *Monkey Tricks*

"Danny" was a big, brown monkey who was full of naughty tricks. When he was taken to the Zoo to live, he rode in a taxi. He put his paws out the window and snatched off a policeman's hat.

1. What do you think his keeper did then?
   (a) Tried the policeman's hat on Danny.
   (b) Told Danny not to do that again.
   (c) Closed the taxi windows.

At the Zoo, the keeper put a little red cap on Danny and took his picture. Right after that, Danny tried to eat the red cap.

2. What do you think his keeper said to him?
   (a) "I won't take your picture again!"
   (b) "I won't give you any more red caps!"
   (c) "Here is another red cap to eat!"

Danny liked to sit on a little wooden chair. One day he broke it. He liked this game so well that he broke a chair almost every week.

3. What did his keeper do then?
   (a) Gave him an iron bench.
   (b) Gave him two chairs a week.
   (c) Didn't give him anything to sit on.

Type C Type D

(c) Throwing Snowballs.

Type C

36. *The Robins' Queer Home*

An old flower pot with a piece broken out of the bottom had been placed in the crotch of an apple tree. It lay all winter on its side with the mouth close to the tree trunk.

In the spring Mother and Father Robin were looking for a cozy place to build a nest. They saw the flower pot and thought it would be just right.

The hole in the bottom made a good front door. Both Robins carried in leaves and twigs and bits of straw and grass for the nest. Soon six blue eggs were laid. How proud the Robins were then! They were always snug and warm in their queer little home.

1. Write where the Robins built their nest.
2. Write when the Robins built.
3. Draw a picture of the flower pot and put an X on the front door.
4. Draw the nest that was inside. Draw the eggs in the nest.

Type D

27. *Evening in Fairyland*

When the fireflies light their lamps on warm June evenings, you may be sure the Fairies are going to have a party!

Fairies love to dance. They spread their pretty wings and trip around like butterflies. Their little feet go flying over the moss-covered ground and never seem to get tired.

Have you ever heard Fairy music? It is the sweetest, softest music in the world. The Fairies dance to the music of the nightingale's voice and the fiddling sound of crickets' wings.

1. Who lights the lamps on June evenings?
   (a) Firecrackers; (b) Firemen; (c) Fireflies.
2. When do the Fairies have parties?
   (a) January nights; (b) June evenings.
3. What do the Fairies love to do?
   (a) Dance; (b) Swim; (c) Dive; (d) Run.
4. What do they look like when dancing?
   (a) Fireflies; (b) Buttercups; (c) Butterflies.
5. Whose voice makes sweet music?
   (a) Butterfly; (b) Cricket; (c) Nightingale.
6. What makes a fiddling sound?
   (a) Fairies' wings; (b) Crickets' wings.

Among the many individuals and groups trained with materials of these types, gains in *rate* of reading have been most spectacular. Some individuals, ranging from pupils in the second grade to students in the university graduate school, have, as the result of a few weeks' practice, more than doubled their rate of reading. It should be realized, moreover, that persons whose reading-rate equals the "norms" for reading-rate which accompany such tests as the Gates series, are demonstrating merely an average or mediocre, rather than an ideal or optimum performance. Indeed, some of the most brilliant gains have been made by classes and individuals who, although equalling or exceeding the "norms," were really functioning far below their optimum rates. Thus, in a local public school, one third grade class which was about ten per cent above the "norms" at the beginning of a six-weeks' practice period, ended with a gain that would have been otherwise achieved in little less than two and a half years of regular school and out-of-school reading.

In other cases, the improvement most needed is in *accuracy* of comprehension rather than in rate. Thus, a pupil may read directions or details or other materials so rapidly, and hence so superficially, as to be incapable of accurate understanding. In this case, the emphasis should be shifted in introducing each exercise, in supervising the work, in scoring and displaying results, and in conducting follow-up discussions so as to direct learning toward the improvement of accuracy without sacrifice of an optimum degree of fluency. Improvements in accuracy thus secured in work with individuals and groups are really quite as great, even if usually not so spectacular in ordinary forms of display, as those in speed. Gains in accuracy which bring the reader's score up from twenty-five or fifty per cent correct answers to approximately perfect accuracy in reading material of proper difficulty are not uncommon results of a few weeks of practice.

Although fullness of comprehension is closely related to accuracy, a distinction can usually be made between them. For example, a child may be able to solve comparatively easy comprehension questions with a high degree of accuracy but be relatively less competent when comprehension of a more subtle type, requiring greater thoroughness of understanding, is required. The materials are designed to make provision for increasing fullness of comprehension as well as speed and accuracy. Thus, nearly every exercise contains one or more compre-

hension problems more subtle than the majority. These problems are designed especially to promote discussion of the material after it has been read and to provide natural incentives for rereading the selection. Discussion, disputes, disagreements, and reconsideration of the content are most effective means of cultivating more comprehensive understanding. The practice exercises in each booklet, moreover, increase gradually in difficulty so that stimulus for comprehending thoroughly materials of gradually increasing complexity is provided.

Speed, accuracy, and fullness of comprehension are often not sufficiently specialized. Thus, a pupil may read all four types of material with a rather uniform rate of speed. This speed may be about optimum for reading to note details but unnecessarily slow for comprehending the general significance of the passage and too fast for adequate understanding of directions. This pupil lacks adaptability; his reading skills are inadequately specialized. In the first type, speed and accuracy should be emphasized equally in further practice; in cursory reading the rate should be increased; and in reading of directions accuracy should be fostered while the rate is reduced. In this way, the pupil is enabled to acquire the subtle techniques essential to adaptability to the several reading purposes.

IV. ADJUSTING THE PROCEDURE TO INDIVIDUAL NEEDS

The practice materials are thus made adaptable to the more common forms of individual reading needs, as well as to those which cluster around the typical form of mediocrity. The teacher is therefore likely to ask promptly how she is going to discover what type of guidance her many individual pupils most need and how she is going to manage such a variety of cases at once. She is likely to suspect that this is another scheme which may be sound in theory but impossible to practice in a class of forty pupils. The best answer that can be given is that individual needs have been determined and practice adjusted to them by typical teachers in typical schoolrooms.

Individual needs may be determined in two ways. The better way is to use as a preliminary step the Gates Silent Reading Tests which, in a convenient manner, measure proficiency in terms of both speed and accuracy. These four tests require less than thirty minutes of testing time, and are easily scored and interpreted in terms of individual needs. If these tests cannot be given, the first two or three

exercises in each booklet can be given to the pupils as tests, and comparisons can be made of the attainments within the class. Thus, the relative abilities and weaknesses of the pupils within a teacher's group may be made the basis of directing practice to individual needs.

While the practice materials are so self-manageable that they may be assigned to individual pupils working alone, it is neither necessary nor advisable to individualize the practice. A better plan is to group together those pupils who reveal similar needs. Thus, the class may be divided into several groups. A favorite method, which is practicable and wholly admirable, is that of having the entire class work together at the same time on the same material. Special attention has been given to the development of methods of conducting the practice of whole classes in such a way as to administer to individual needs and at the same time foster the most educative activities. These methods, which are described in detail in a Manual accompanying the materials, may be briefly characterized here.

V. METHODS OF USING THE PRACTICE EXERCISES

In general, the method of procedure for such practice exercises should be similar to that recommended for the richest treatment of recreational and work-type materials in the regular reading course. It should incorporate the following:

1. Introducing the topic of the passage.
2. Providing the means of recording time, when desired.
3. Providing the circumstances which make more effective supervision possible.
4. Recording and correcting the responses.
5. Discussing the material and the individual responses.
6. Providing genuine, intrinsic incentives for rereading and reconsidering the material.
7. Encouraging various follow-up activities.

Introducing the Exercise. After the pupils have read the title in order to make sure that they have found the right page and to secure some idea of the nature of the selection, the teacher may throw out certain hints, or raise a question or preliminary discussion about the contents of the selection. In those cases where several exercises related in theme occur in a series, the teacher may, by means of questions

and discussion, gather up the relevant ideas from the preceding material to introduce the setting of the new exercise. In many cases, the content of the page can be related to some recent lesson, discussion, or event. Skillfully done, such preparatory activities are of genuine educational value in motivating and directing the pupils into the most productive types of approach.

Securing Time Records. The device of setting a time limit in daily practice periods produces several disadvantageous effects. It forces most pupils to stop the reading before the exercise has been completed. It tends to hurry the pupils unduly and to produce tension, strain, and nervousness. If a record of speed of reading is desired for some or all pupils, it can be secured without these ill effects, by the use of the following device. The teacher can adopt a code by means of which the letters A, B, C, and so on, or the numbers 1, 2, 3, and so on, indicate units of time, such as half-minute periods. After the reading is under way, the teacher may write the first symbol at the termination of each unit of time and replace it later by the symbol indicating completion of the second unit, and so on, until every pupil in the group has completed his work. When a pupil completes his work, he glances at the board and writes on his paper the number or letter that appears there.

This device can be used daily without giving an undue emphasis to speed or without causing nervousness, excitement, or tension. It has been effectively used when the emphasis was placed, not on speed, but on accuracy. It can be employed merely for purposes of record and treated quite without emotional concern by the pupils.

On the other hand, it is not always necessary to keep this or any other record of time. Fullness and accuracy, and even speed, can be developed without bothering with the daily time records. A plan that has proved satisfactory is to secure time records occasionally, perhaps once a week or on every fifth or tenth exercise. With these records, improvement in speed may be determined.

Supervision of the Work of Individuals. While the pupils are doing their exercises, the teacher may move about and observe the work of individual pupils. Those who are working unduly rapidly or slowly may be given attention. Incorrect and careless responses to the comprehension exercises may be pointed out and a rereading of the material advised. At this time, the teacher should be alert to dis-

cover the more obvious indications of inappropriate techniques, such as excessive articulation, pointing to the words with pencil or finger, holding the paper too near, or too far from, the eyes, and the like. Thus, the special difficulties and defects of individual pupils can be discovered and guidance may be offered in directing the activities of the children into proper channels. If further attention is required by unusually deficient readers, it is advisable to give it as an addition to, rather than as a substitute for, the group practice periods. The work in the group can be individualized sufficiently to take care of all save rare cases. While handling a group with these materials, it is not difficult to induce certain pupils to emphasize speed, others accuracy, others thoroughness, and others two or all three factors equally. In the following discussion of results and scores, the individual needs can be further emphasized and carried over to the next exercise.

Recording Results. The scoring of the results may be made one of the most educative phases of the use of practice exercises. For this reason it is unwise for the teacher to correct the exercises herself in private. The consideration of responses should be made a group activity. The problems should be taken up in discussion in a group of which the teacher may or may not become an active member. If she does participate, she should treat her own responses to the exercises as merely her opinions and not as final decisions in regard to right or wrong.

Many of the comprehension exercises have been so constructed that more than one response is reasonable. While one is usually best, in most cases a second choice is not absolutely and absurdly wrong, but is merely a second choice. The authors have made some of the second choices fairly reasonable for a definite purpose. If one answer alone were right and the others absurd, the choice would be too easy, and the exercises would not be well designed to encourage fine discrimination. Only by offering among the alternates some which require careful thought and judgment can one hope to produce improvement in the discrimination of rival ideas and solutions. Children, moreover, often read a passage from a point of view different from that taken by adults. When one reads the passage from the child's point of view, an answer obviously poor from the adult's standpoint may be seen as not unreasonable. Another reason for frequently including among the responses some which, while not best, are still reasonable

is that when the pupils do not agree perfectly a natural incentive is provided for discussion and rereading. This matter will be referred to later.

Among the various methods of correcting and scoring the responses, the following have been used with excellent results:

1. The teacher may call upon some child to tell which response he has selected. She may next ask him his reasons for selecting it. Other pupils may then discuss this choice. The children should be encouraged to reread silently and then aloud the parts of the passage which bear on the discussion.

2. The teacher may ask for a show of hands of those children who selected each of the alternative responses. The number favoring each may be written on the board. Reasons for and against the several selections may then be presented.

3. The teacher may read the responses which she thinks are best and then invite the pupils to give reasons for or against the choice.

4. The pupils may, without the teacher's help, compare and discuss their responses. The teacher's choices may be presented and discussed later.

5. The same procedure as in (2) or (3) may be followed, except that the teacher's responses are marked on the teacher's copy of the exercise. The pupils compare their responses with this "key."

If a final score for comprehension is desired, the teacher can decide *after the discussion* what credits are to be given. Thus, she may decide to give a credit of *one* for the "best" choice in a certain case and a score of one-half for a second choice which seemed reasonable to certain children. For a less satisfactory response, but one not entirely without significance, a score of one-third or one-quarter may be given. Zero should be given only for those responses which are quite unjustifiable or unreasonable.

Experience in using these exercises has shown that children are prone to do less well in selecting the comprehension alternatives than they are capable of doing. They seem strongly disposed to be easily satisfied with first impressions. They are less thorough and thoughtful than they are capable of being. The exercises are extremely useful for this very reason, as the limited number of alternatives enables the teacher to narrow the discussion and bring it to a point. Pupils often find that a little more care and thought would have led to the best

answer instead of to the next best one, which they gave. After a rereading, the "best" answer becomes apparent to them.

Since the average pupil can, by careful reading, get reasonable answers, and usually the "best" answers to nearly all of the exercises in the material for his grade, it is not unfair, but, on the contrary, educationally desirable to expect a pupil to select the "best" or at least a reasonable answer for every exercise. The expectation for comprehension, then, should be: Every answer a good one. The standard to hold before the pupils is really one hundred per cent reasonable responses.

Discussion and Rereading. The activities with each exercise should culminate in discussion and rereading. These final activities are of great importance for pupils who are having difficulty. Through discussion, the pupils are led to reëxamine their interpretation, to compare it with the understanding of other readers, and thus to achieve fuller and more accurate comprehension.

Rereading is of great value as a means of improving rate of reading and developing techniques of skimming material, reading to find the answer to a particular question or the solution of an issue. The rereading should grow out of a disagreement or doubt developed by the discussion, instead of being done as a response to a request to reread. When rereading is motivated by a purpose—to find the proper solution of the issue, to find the statement which gives the relevant facts, to prove a point or disprove another's assertion—it is meaningful and zestful. It is also a different kind of rereading from mere review reading. It brings out and develops habits of selective thinking—skimming this, concentrating on that, reconsidering the other, in the light of the particular point at issue. Flexible, alert, selective thinking is then a characteristic of the reading. These are highly important techniques to develop in connection with reading of every type.

Rereading motivated by a question or purpose is a means *par excellence* of developing maximum speed and flexibility in reading. This is due partly to the fact that rereading is easier than first reading. The thought is already more or less in mind, and most of the difficult and unusual words, phrases, forms of diction, and ideas have been mastered. There are few encumbrances. The easier parts can be swept over with greater speed. Thus, habits of reading rapidly by large thought units, of regularity in eye movements, and the like can

be freely exercised. Flexibility is achieved as the pupil learns to change his pace by skimming the easy portions or the parts not bearing on the issue and by slowing up somewhat when a section requiring more attention is encountered, speeding up again as it is passed, and so on.

Follow-up Activities. Out of discussion and thorough understanding may issue an interest in various follow-up activities. One child may find his interest attracted by the topic and desire to read more about it. Books on related topics may then be sought in the library and read. Another may wish to see pictures and later to draw illustrations related to the theme. Another may suggest some form of dramatization of the characters and events portrayed. Another may plan the construction of costumes, apparatus, or other objects described in the selections. Another may propose a trip to the museum, the zoölogical garden, the park, the factory or farm where objects, animals, or events mentioned in the selection may be observed. Thus, any selection may and should lead to further linguistic, artistic, dramatic, constructive, and exploratory activities.

As a matter of fact, in the choice and variety of topics and materials used, and in the selection of methods of enlisting interest and promoting discussions, the exercises have been written and arranged to contribute as much as possible to the development of incentives for further reading and other follow-up activities. Indeed, the way in which the primary reading activity has led to further activities of linguistic, artistic, dramatic, constructive, and exploratory types has been in many instances the most gratifying outcome of the work.

In these ways, then, the proficiency-producing elements of the practice experiment may be made available and combined with, rather than divorced from, those features of educational materials and methods which make an experience educative in far-reaching ways.

JUVENILE ACHIEVEMENT AS RELATED TO SIZE

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CURRENT psychoanalytic theories of motivation state, without offering verifiable evidence, that intellectual superiority arises as a "compensation" for inferiorities of physique.[1] This idea, that the successful are those motivated by physical disadvantage, is, however, not of recent origin, but was set forth at least as long ago as 1597 by Francis Bacon,[2] who saw deformity as "an advantage to rising," because "whosoever hath anything fixed in his person that doth induce contempt, hath also a perpetual spur in himself to rescue and deliver himself from scorn."

Currently, Alfred Adler is the writer most frequently identified in the popular mind with the theory of the "inferiority complex" as the source of notable achievement. Since this paper deals only with *size* as related to scholastic achievement, quotation will be limited to that aspect of physique. For instance, Adler[3] mentions smallness as one of the factors underlying "compensating ambition." He pictures the child as brooding over inferior size, among other items of inferiority. "The fault lies . . . because I am too small, too weak, have too small a head. . . ." Again he says, "The problem of growth engages the attention of children to an extraordinary extent, and in the course of their development they are constantly reminded of it. It is thus in regard to the size of his body. . . . The entrance of the child upon his masculine rôle, of which we have often spoken, re-

[1] Vaughn, Wayland E., *The Lure of Superiority*. Henry Holt and Company, New York, 1928.
[2] Bacon, Francis, *Of Deformity*. Essays. Donohue and Henneberry, Chicago. (First published 1597.)
[3] Adler, A., *The Neurotic Constitution*. Moffat, Yard and Co., New York, 1917. Pp. 58, 279, 365, 367.

quires a distinct largeness of the person of the individual and parts of his body. Where this is denied him . . . he acquires the heightened impulse to . . . activity, together with the acute feeling of contrast, and begins to measure himself constantly with others, especially with the persons of importance in his environment, and finally with the heroes from tales and stories." Again, "Perhaps the striving to be first, to be master of all, is constructed on a feeling of inferiority based . . . on smallness of stature."

Whether Adler would go so far as to hold that "high I.Q." itself, as measured by intelligence tests, is to be regarded as "compensatory," developed by the "striving" of children who are organically inferior, one can hardly say. Adler does not take cognizance of quantitative terms, such as I.Q. However, in any case, a sufficient amount of evidence now exists to prove that "high I.Q." is, in fact, associated *not* with inferiority of size, but on the contrary, with superior size and strength.[4, 5, 6]

I. THE INDICATIONS FROM QUANTITATIVE EVIDENCE

The very early studies by Porter,[7] Bolton,[8] and others showed that children who excel in studies tend to be large and strong, not small and weak. Superior size is thus associated both with "high I.Q." and with scholastic excellence. The connection found between size and scholastic excellence may prove to be fortuitous only. Scholastic excellence may bear no essential relationship to size, the association arising merely because the very intelligent are also the large, as a group. In any case, the quantitative evidence previously made available is directly opposed to the theory that small children are effectively motivated by their smallness to excel. It is the large who are excellent, on the whole.

There exists one quantitative study of motivation, planned chiefly toward other ends, which nevertheless affords incidental data in regard to whether children who are inferior organically are effectively

[4] Terman, L. M., *Genetic Studies of Genius.* Vol. I. Stanford University Press, 1925.

[5] Hollingworth, L. S. and Taylor, G. H., "Size and Strength of Children Who Test Above 135 I. Q." *Yearbook of the National Society for Study of Education,* 1924.

[6] Stoke, S. M., *Occupational Groups and Child Development.* Harvard University Press, 1927.

[7] Porter, W. T., *The Physical Basis of Precocity and Dullness.* Transactions of the Academy of Science of St. Louis, 1893. Pp. 161-181.

[8] Bolton, T. L., "The Relation of Motor Power to Intelligence." *American Journal of Psychology,* Vol. 14:615-631, 1903.

motivated to unusual displays of rivalry. Maller[9] found relatively *non-competitive* school children to be inferior to their group in health history (-2σ) and in health condition (-3σ). He also found the *non-competitive* to be inferior in social status (-2σ) and in popularity (-2σ).

Thus the small amount of quantitative and verifiable evidence we have had goes counter to the theory that, among school children, superior performance and ambition are functions of "inferiority."

II. THE PRESENT STUDY[10]

There remains, however, the possibility that among children *equally gifted*, those who are smallest may achieve most; that, brightness being given, the small may be effectively "spurred" to excel intellectual competitors who are superior in size and strength. The present study was undertaken, therefore, to hold age and ability constant at different degrees of size, letting achievement vary as it might.

Fifty children, all of I.Q. (Stanford-Binet) at or above 135, are herein compared with each other in respect to scholastic achievement. The comparison is drawn after the ordinary competitions and cooperations of school life have extended over a period of two years. Our subjects are therefore all gifted intellectually by actual test, and the smallest are as gifted as the largest. Most of them are tall and heavy *as compared with unselected children of their age*, as is characteristic of the highly intelligent. Nevertheless, *as compared with each other*, these children differ markedly among themselves in size. Some are, indeed, quite small in relation to their competitors, within this group working together for two years. Our problem is to observe whether the smaller individuals in this group will show greater accomplishment (A.R.) than will the larger, age and brightness being kept constant. If "smallness of size" really affects the psychology of the child by motivating him "to be first, to be master of all," then the small among these very able children, in close and continuous association with each other for a prolonged period of time, would

[9] Maller, J. B., *Coöperation and Competition*. Teachers College Contributions to Education, No. 384, 1929. P. 141.

[10] These data were collected in the course of the work of a Joint Committee, consisting of Mr. Jacob Theobald and Miss Jane E. Monahan, of Public School No. 165, Manhattan, Miss Margaret V. Cobb, Dr. Grace A. Taylor, and Professor Leta S. Hollingworth, of Teachers College, Columbia University. The study was supported in part by funds granted by the Carnegie Corporation of New York.

be expected to exhibit the alleged "impulse to activity" by yielding comparatively high A.R.'s in scholastic subjects.

It may be added that according to the judgments of those who taught and tested these children from 1922 to 1925, inclusive, the latter were very competitive in temperament. Tests were always eagerly taken. Nothing was ever at any time said by the investigators to the children about achievement in relation to size. Those in charge of experimentation did not have in mind the working out of this problem until, when experimentation for other purposes had been completed, it was perceived that incidentally all data were at hand for an examination of size in relation to achievement.

III. METHODS OF MEASUREMENT

The measurements taken to obtain the requisite quantitative data were as follows, all tests and measurements being made by qualified experts:

General intelligence was determined by means of the I.Q., according to Stanford-Binet. *Scholastic achievement* was measured by means of the Stanford Achievement Test, scored according to the age norms for 1922. The ratio between the E.Q. (educational quotient) and the I.Q. (intelligence quotient) was taken as the measure of accomplishment. If this ratio were 100 in a given case, obviously this would mean that the child in question accomplished just what would be expected from his I.Q. Accomplishment below expectation would yield a ratio below 100; accomplishment beyond expectation would yield a ratio above 100.

Stature was determined by measuring each child on a standard statiometer, in inches, and converting these units into centimeters for comparison with norms. *Weight* was taken in ordinary indoor clothing, in pounds, being converted into kilograms, for comparison with norms. A detailed description of these measurements of size has been given elsewhere.[11]

IV. TREATMENT OF THE MEASUREMENTS

Every measurement and every ratio was taken or calculated *individually*. All means and medians for comparative quintiles are calculated from individual scores—never from group scores. For example, the mean weight ratio for the 5th quintile is 155.1 ± 9.6.

[11] Hollingworth, Leta S., "Do Intellectually Gifted Children Grow toward Mediocrity in Stature?" *Pedagogical Seminary and Journal of Genetic Psychology*, September, 1930.

TABLE I

DATA IN FULL FROM PHYSICAL AND MENTAL MEASUREMENTS OF GIFTED CHILDREN[1]

Child No.	Sex	Age June 5, 1924	IQ (S-B) 1922	EQ (Stan. Ach.) June 5, 1924	IQ–EQ Ratio June 5, 1924	Ht.-Ratio Jan., 1924	Wt.-Ratio Jan., 1924	Stature (cm.) Jan., 1924	Weight (kg.) Jan., 1924
1	M	10–2	141	148	105	106.4	116.9	135.0	30.4
2	M	10–5	156	163	104	114.3	137.9	150.4	38.5
3	F	10–1	138	131	95	99.9	92.3	124.5	23.2
4	M	11–2	150	155	103	100.7	147.7	132.6	41.2
5	F	10–8	145	153	106	104.0	131.8	137.4	37.0
6	M	9–4	154	158	103	99.9	101.8	122.2	25.9
7	M	10–3	142	147	104	110.2	127.4	140.0	33.1
8	F	10–6	167	164	98	103.6	135.8	134.9	38.1
9	M	11–6	150	138	92	105.9	104.1	144.0	32.1
10	F	10–1	151	144	95	104.3	100.7	130.8	25.3
11	F	10–7	157	158	101	108.9	175.9	Ratios based on 1925	
12	M	10–7	140	137	98	108.1	141.5	142.2	39.5
13	F	10–9	144	136	94	108.5	121.6	141.2	34.0
14	M	9–7	163	167	102	110.0	142.9	141.0	37.2
15	M	10–1	154	119	77	106.0	139.6	134.6	36.3
16	M	10–1	135	145	107	108.0	153.3	137.2	39.0
17	F	9–11	143	142	99	107.1	129.9	133.4	28.4
18	M	10–2	154	149	97	112.2	138.7	142.5	36.1
19	M	9–9	172	193	112	104.6	122.9	132.8	32.1
20	M	10–5	160	166	104	106.6	178.3	140.2	49.8
21	M	10–8	175	165	94	111.6	153.2	146.8	42.7
22	M	10–7	149	147	99	106.7	131.7	140.5	36.8
23	F	10–11	152	149	98	105.0	116.5	136.7	32.7
24	M	11–6	156	149	96	100.8	96.5	136.9	29.7
25	M	9–1	166	171	103	100.3	96.8	122.7	24.6
26	F	10–5	170	151	89	98.1	92.3	127.8	26.9
27	M	9–11	171	174	102	106.2	134.7	134.9	35.0
28	M*	10–10	171	156	91	105.5	102.9	143.3	30.8
29	M	11–3	141	145	103	111.7	179.6	147.1	50.2
30	F	9–9	160	163	102	105.7	114.9	131.6	28.9
31	M*	9–10	133	148	111	95.4	100.7	130.8	30.1
32	F	11–0	145	139	96	111.8	128.0	145.5	35.9
33	M	10–2	138	150	109	103.4	128.2	131.3	33.3
34	M	11–2	137	142	104	99.0	95.9	130.3	26.8
35	M	9–5	149	157	105	108.0	121.6	137.2	31.6
36	M	10–10	156	158	101	94.6	97.2	124.5	27.1
37	M	10–8	162	154	95	101.1	117.4	133.1	32.8
38	F	10–8	164	151	92	102.0	114.9	132.8	32.3
39	M*	10–11	139	139	100	104.8	117.5	142.2	38.7
40	F	10–11	154	142	92	106.1	133.5	138.2	37.5
41	F	10–11	147	148	101	104.4	118.4	135.9	33.3
42	M	10–11	157	150	96	108.6	125.5	143.0	35.1
43	M	10–0	141	146	104	101.4	97.7	128.8	25.4
44	M	10–3	135	146	108	111.0	134.7	141.0	35.0
45	F	10–8	145	162	112	109.8	99.6	Ratios based on 1925	
46	F	10–6	150	152	101	101.9	88.3	Ratios based on 1925	
47	F*	10–0	162	153	94	97.1	97.1	128.3	29.3
48	M	9–11	141	162	115	108.8	122.7	138.3	31.9
49	M	8–1	167	187	112	109.9	103.4	126.0	24.0
50	M*	9–7	188	184	98	96.7	86.7	132.6	27.5

[1] All children are Jewish, except those denoted by an asterisk.

This was determined by finding each child's weight individually, and then finding the central tendency of the ten several items.

There are two bases on either of which comparative size may be considered in dealing with groups like ours. One is *relative size* in terms of the ratio which an individual bears to the norm for age, race, and sex. The other is *absolute size*, in terms of a unit like inch, centimeter, pound, and so forth. We have employed both bases in this study.

Table I presents the complete data for the fifty children studied, upon which all of the other tables are based. The complete data are thus given, so that anyone wishing to treat them in ways not herein undertaken, may do so. It will be noted that three of the children have size ratios as determined in 1925, not having been measured in 1924 in this respect. That this juxtaposition of size

TABLE II

INFLUENCE OF STATURE ON SCHOLASTIC ACHIEVEMENT AMONG HIGHLY INTELLIGENT CHILDREN

NUMBER OF CHILDREN IN EACH QUINTILE = 10

Quintile Based on Stature-Quotient	Size		Achievement		Intelligence		Age	
	Height-Ratio		EQ − IQ Ratio		IQ (Stanford-Binet)		Months	
	Mean w. A.D.	Med. w. M.V.	Mean w. A.D.	Med. w. M.V.	Mean w. A.D.	Med. w. M.V.	Mean w. A.D.	Med. w. M.V.
(Tallest) 5	111.3 ± 1.1	111.3 ± 1.0	103.2 ± 4.8	103.5 ± 5.5	152.3 ± 10.7	149.5 ± 8.0	122.8 ± 8.4	124.0 ± 6.5
4	107.9 ± 0.7	108.5 ± 0.5	101.8 ± 3.8	100.0 ± 4.0	147.5 ± 6.9	146.5 ± 6.0	124.8 ± 5.6	126.0 ± 7.0
3	105.6 ± 0.5	105.8 ± 0.4	96.1 ± 7.5	99.0 ± 6.5	156.4 ± 9.7	154.0 ± 9.5	125.7 ± 7.1	126.0 ± 6.5
2	102.7 ± 1.3	102.7 ± 1.3	99.7 ± 4.5	99.5 ± 4.5	152.1 ± 8.1	150.5 ± 8.5	126.8 ± 6.8	127.0 ± 7.0
1 (Shortest)	98.2 ± 1.8	98.5 ± 1.6	100.1 ± 4.9	102.0 ± 3.0	155.4 ± 13.0	155.0 ± 13.0	121.8 ± 7.0	120.5 ± 6.5

ratios for 1925 and accomplishment ratios for 1924 is justified by the constancy of size-ratios from year to year has been shown elsewhere by one of the present investigators.[12]

Table II, derived from Table I, shows how the A.R.'s stand when the fifty have been divided into quintiles on the basis of height-ratios, individual ratios having been determined by comparing each child's size with that of the average for his age, race, and sex.

TABLE III

INFLUENCE OF WEIGHT ON SCHOLASTIC ACHIEVEMENT AMONG HIGHLY INTELLIGENT CHILDREN

NUMBER OF CHILDREN IN EACH QUINTILE = 10

Quintile Based on Weight-Quotient	Size		Achievement		Intelligence		Age	
	Weight-Ratio		EQ – IQ Ratio		IQ (Stanford-Binet)		Months	
	Mean w. A.D.	Med. w. M.V.	Mean w. A.D.	Med. w. M.V.	Mean w. A.D.	Med. w. M.V.	Mean w. A.D.	Med. w. M.V.
(Heaviest) 5	155.1 ± 9.6	150.4 ± 9.9	98.6 ± 5.7	101.5 ± 3.0	152.9 ± 9.1	154.0 ± 7.5	125.5 ± 6.5	126.0 ± 6.0
4	132.6 ± 2.7	131.7 ± 3.0	101.3 ± 4.5	100.5 ± 4.0	150.3 ± 9.4	147.0 ± 8.0	125.2 ± 5.6	125.5 ± 5.5
3	121.2 ± 2.7	121.6 ± 3.6	102.7 ± 5.5	102.5 ± 4.5	149.5 ± 8.6	145.5 ± 4.5	122.4 ± 6.6	125.5 ± 7.5
2	106.0 ± 5.7	103.2 ± 2.4	100.8 ± 7.2	100.0 ± 8.0	154.7 ± 8.6	153.0 ± 7.5	122.0 ± 9.2	124.5 ± 8.0
1 (Lightest)	94.1 ± 3.3	96.2 ± 1.3	98.5 ± 4.1	99.5 ± 4.0	156.4 ± 12.1	156.0 ± 12.0	124.8 ± 8.0	123.0 ± 7.5

Table III, derived like Table II, deals with weight-ratios, determined individually as were the ratios for height.

Tables II and III establish that there are no reliable differences among A.R.'s, from quintile to quintile. The shortest quintile of the total group displays no higher A.R. than does the tallest quintile, and the same fact holds for comparisons according to weight.

[12] *Ibid.*

It might, of course, still be possible that differences in *absolute size* might be effective, even though *relative size* yields no result. Some of the youngest children in the group, *large for their age* (hence having large ratios), but small in absolute units (e.g., in centimeters), may be included in quintiles other than the fifth, when the ratios are used for determining quintiles.

TABLE IV

COMPARISON OF ACCOMPLISHMENT RATIOS AMONG FOUR GROUPS OF BOYS GROUPED ON THE BASIS OF ABSOLUTE PHYSICAL SIZE

N = 14 IN ALL COMPARATIVE GROUPS. SEX AND RACE ARE CONSTANT FOR ALL GROUPS

TRAIT	GROUP (N = 14)	MEDIAN SIZE	ACCOMPLISHMENT EQ–IQ RATIO	MEDIAN AGE (mos.)	MEDIAN IQ
Weight (kg.)	Heavy	37.9 ± 2.3	101.5 ± 7.6	126.0 ± 5.0	154.0 ± 7.5
	Light	30.0 ± 2.9	104.0 ± 2.0	120.0 ± 7.5	152.0 ± 10.5
Height (cm.)	Tall	141.6 ± 1.5	102.5 ± 4.5	126.0 ± 4.0	149.0 ± 8.0
	Short	132.0 ± 3.0	103.0 ± 2.0	120.5 ± 8.0	155.0 ± 11.5

To see whether the A.R.'s would show a difference in favor of the small when absolute size is considered, we chose the fourteen tallest boys and the fourteen shortest boys, in terms of centimeters, and compared them; and similarly, the fourteen heaviest boys and the fourteen lightest boys in terms of kilograms. These comparisons, limited to one sex, and to one race (the Jewish), are presented in Table IV. They, also, show no reliable differences between A.R.'s for large and small boys.

V. CONCLUSIONS

The conclusion from this study, based on fifty gifted juvenile competitors, who had been in contact with each other for two years, is

that intellectual achievement is unaffected by motivation from smallness of physique. There is no relation between size and A.R., among these gifted competitors. No "compensatory" influence of small size as a physical inferiority is demonstrated or suggested, by these quantitative data.

Whatever may be the inner urges arising from perception of physical smallness, they do not in this sample exert any appreciable effect upon measurable scholastic performance, in a competitive group. Thus the theory that children who are small are likely to be effectively motivated to "shine" as scholars, is not borne out by our data.

It is clear that other possible effects of inferiority of size upon conduct, such as clowning, daydreaming, etc., are not here investigated. The investigation is strictly limited to the question whether superior scholarly accomplishment is to be accounted for by motivations from comparative size.

Furthermore, since the positive correlation between size and scholastic accomplishment, demonstrated years ago by Porter,[18] disappears when I.Q. is held constant at varying sizes, it is suggested that the association between large size and excellence in studies is fortuitous only, being really due to the positive correlation which exists between size and general intelligence.

[18] Porter, *op. cit.*

GROUP DISCUSSIONS*

By TOMPSIE BAXTER

Teacher in The Lincoln School of Teachers College

FOR several hours in each school day, the pupil in elementary school undertakes to live with a rather large group of children of his own age. The school enables the child to live in a real social situation, and that situation, like all other life situations, tends to become more complex as its activities increase. Where large units of work are the core of the curriculum, as in The Lincoln School, Teachers College, the individual child comes in contact with and takes part in a variety of activities, he deals with many facts and ideas about which he is expected to do something, and he makes emotional adjustments in many kinds of situations. All the members of the group are faced with these same problems. Tney come together to make plans for meeting these problems of everyday life or to relate their experiences in solving them. In such a school, group discussions become a vital part of any coöperative activity.

I. USE OF DISCUSSION PERIOD

Though group discussions seem particularly applicable in teaching units of work, such discussions are also carried on in situations which have no connection with the unit. The group, including both children and teacher, meet to discuss many phases of their work, such as to plan for taking a trip to the museum, for giving an assembly program, or for carrying on their work within the big unit. They meet to share experiences or to clarify ideas about the work of the school council, or about the symphony concert; to hear and discuss a report given by one of their members or to discuss a lecture given by an adult during assembly; they hold a conference to draw some conclusions about right conduct in the lunchroom, or to judge

* This article was first read before a group of four elementary teachers of The Lincoln School, who had met to discuss techniques of teaching especially applicable to carrying out units of work. After discussion by this group, the revised report was submitted for the criticisms and suggestions of the entire elementary school staff.

their own conduct toward some member of the group; they come together to summarize the work covered and the progress made thus far in their unit; one member of the group shares with the other members his pictures relating to the unit, and another reads a poem he likes. To sum up, then, the group assembles for discussion:

1. To make plans.
2. To clarify ideas.
3. To report on individual research work done.
4. To make judgments and decisions, and to draw conclusions.
5. To summarize work covered and progress made.
6. To share experiences and ideas.

The class meetings held once a week in The Lincoln School afford a good illustration of the group discussion technique. These meetings are held primarily to discuss the reports which are brought by the class representatives from the school council. After this business has been taken up, any matter of general interest to the group may be considered. An account of a fifth-grade class meeting follows. This fifth grade is composed of twenty-two children, nineteen of whom have been together in this same school for at least three years. The other three children entered the school at the beginning of the year. E., who came to us from Texas, has had a difficult time making an adjustment to the group and to the school. At a meeting preceding the one reported here it was found that four boys had been teasing her. The class decided that this was unfair and that they did not want to be so discourteous to a new pupil. Some child suggested that these boys be asked to report at the next meeting on their treatment of E. Another suggested that the names of these boys be placed on a list, which should be read at each successive meeting until the teasing stopped. Their suggestions were accepted by the group, and at a meeting late in the year the group agreed that "E. has become one of us."

Class Meeting

President R. called the meeting to order. The minutes of the last meeting were read. Then the president called for a report from the council members. They reported that a library assembly was to be given by the entire school, some grades dramatizing a part from a favorite book, other grades giving scenes which had taken place in our own library. This fifth-

grade group decided to give a scene from a book. Several books were suggested by individual members of the group, and three favorite ones were chosen. A committee composed of the teacher and two pupils was then appointed to decide which among the three presented the best possibilities for dramatization.

It was then suggested that the membership of the different committees caring for the room be changed. The president appointed two girls to serve on the milk-chart committee. B. protested, because he thought one member should be a boy. J. thought it was not necessary that a boy be on every committee. The president said he would balance it by placing two boys on one committee. Other committees were selected with very little discussion. There was a protest when J. B. was selected for the cloakroom committee, however, because he had served; therefore another person was selected. Then, B. suggested that those who brought in many things for the bulletin board be placed on that committee. The president asked if there was any other business. D. said that some of the boys had been wandering about through the other classrooms after club, instead of getting their wraps in their own classrooms and then leaving the building, as they are supposed to do. J. L. then broke in, saying to another boy in the group, "A., you aren't listening, and you should be because you go into other people's rooms." The teacher then said, "Perhaps you had better tell A. something definite to do which will help him to be sure of listening." J. said, "A., put your book away, inside your desk."

The president asked for a report from the four boys who had been teasing E. B. said, "I have been good to E. I have not teased her a bit since last week's meeting." J. L. said, "I have been good to E." D. said, "I called E. 'Texas' once and she did not fight back." T. said, "I haven't teased E. since last week."

President R. then asked E. to report how she thought the boys had treated her. She said they had not teased her any, but had been good to her. The president then asked her to report on herself. She said she was trying not to fight and not to get angry when someone teased her. The president then asked the class whether they thought E. had improved. Several children spoke up, saying that she had. J. said E. did not now fight and hit people when the children were waiting to go into the lunchroom. Someone else said she did not get angry and fuss when she was called "Texas." B. suggested that the names of the four boys should be taken off the list. The meeting was then adjourned.

The discussion at this meeting presents evidences of the building of good attitudes: group responsibility for the happiness of individual

members; a rather general willingness to see one's own actions in the light of their effect upon others; E.'s desire to show self-control; J.'s desire to bring into the discussion the person who is not listening; B.'s earnest desire to finish up this one incident and get it out of the way; B.'s desire for fair play in selection of committee members; the president's willingness to follow suggestions. Then, too, all through the discussion there seemed to be a willingness and a desire to hear both sides of a question, to discuss freely; a realization that this living together must be a question of giving and taking. Here the class president is developing splendid qualities of leadership, and public opinion is being molded. Little permanent good will result from one such meeting, but let like meetings continue over a period of time and certain attitudes and habits of thinking and acting will become fixed. The teacher, as the most experienced member of the group, will determine to a large extent the nature of these attitudes and habits.

Another kind of discussion is that brought about by the reading of a report contributed by one or more members of the group. An illustration of such a discussion follows.

B. and G. did some reading about John Smith. Each made an oral report to the class on what he had read. Using the suggestions that the class had made, they together decided which parts of their stories they would use. B. then combined the efforts of the two into one story, which was mimeographed and given to the members of the class for a permanent record. The first part of the story only is given here because of lack of space.

JOHN SMITH

Part I

John Smith was born in England in 1579. He was the son of a farmer. His boyhood was in the days of English explorers. His father died when John was fifteen. After that he had a chance to go to France in a merchant vessel. The voyage was a short one but Smith liked it very much, because France was having a civil war, and he soon found his way into the army. This made quite a lot of excitement for John. Later he went to Holland to fight the Spaniards. After that he was captured by thieves. They took all he had. Smith met an earl who had known his father. The earl took John on a tour of the cities of southern France. At Marseilles, John decided to take passage on a ship bound for the Holy Land. During

the voyage a storm came up, and some superstitious person thought John was the cause of it, so they threw him overboard. Smith was a good swimmer. He saw an island, so he made for it and spent the night there. The next day he was rescued. The ship got into a fight and at the end of the fight Smith had a little box that had a thousand dollars in it. He went to the land where the Turks lived. There he made signals with torches which proved so successful that he was promoted to the captain of a company of cavalry. He was wounded. The Turks saw he had rich armor, so they cured his wounds and held him for ransom. But no ransom came, so he was sold in slavery. In 1604 he made his escape and returned to England. He was only twenty-four, but his experiences were varied enough for a man of fifty.

B. started reading the story of John Smith aloud. He read in a slow, indistinct voice, articulating very poorly. There was a protest from the class. They could neither hear, nor understand what he was saying. B. was then asked to call on the different pupils who had criticisms to make. The children said they wanted him to say more about the things he had hinted at. Was Smith fighting for England or for the different countries into which he went? How did he get that thousand dollars? What kind of signals did he make with torches and for what? They were not pleased with this first part of the story, but thought it very poor. During its discussion the class turned to G. also with great disapproval. B. was asked to do more reading on the first part of the story in order to answer the questions asked by the class and then make a report. The second part of the story was then read. A few changes were made. The class decided that the second part of the story was good.

In this particular discussion, B. found class disapproval of wasting time which is supposed to be spent in study. From this and similar discussions the pupils are learning to expect and demand clear expression of thought, and enough detail given on a subject for an understanding of the thing being discussed; to summarize the important points in a story; to give and to take criticism; and they are also learning the value of discussing one's work with others.

II. PARTICIPATION BY INDIVIDUAL CHILDREN

The amount of participation in the discussion by the individual members of the group depends upon the character of the discussion,

the kind of person the individual is, his general experience, and the experiences he has had as a member of such a group. If the individual child is of superior mental ability, has a superior home environment, where he comes in contact with the best the world has to offer to-day in the arts and sciences, if he has had some experience in travel and in association with other children his own age, then he will probably enter whole-heartedly into any discussion. As his experiences in discussion increase, the contributions he makes will grow more valuable. On the other hand, if his ability is average, and his home environment is so poor that there are few if any books, no good pictures, no good music; if this home offers no opportunity for contacts with people who are interested in worth-while things; if the child does not get far away from home; if he has little opportunity to live with other children his own age, then he will find himself at a loss in discussing books and pictures, and in determining the right mode of conduct in certain situations. His opportunities for experiencing must be widened and he must have help in formulating his ideas. Then he will probably need much encouragement in order to express these ideas. But children stimulate each other to talk. If the group is really experiencing together, each child is interested in making a contribution, and is ready to listen to other children of his own age who have had the same or similar experiences and who face problems similar to those confronting him.

III. VALUES TO CHILDREN

The timid child develops a greater confidence in himself. The suggestions which he makes are given attention. He feels that he has something to contribute; and can help his group to make decisions or draw conclusions.

The individual child has a chance to develop a more open mind. He hears another side of a question presented, a side which he had not thought of, and becomes more tolerant of the opinions of others; at the same time the overconfident member may find his remarks ignored and may learn not to make his decisions so quickly.

Opportunity is presented for the development of leadership. A child has found and read a magazine article relating to some phase of the unit of work. He presents this to the class and leads the

discussion because he knows more about the subject than anyone else present. If he is not prepared, that is, if he proves himself incapable of leading on this particular occasion, the other members of the group soon convince him that he must make further preparation before they are willing to listen. Then, too, in any class there are certain children who possess definite qualities of leadership. The discussion gives these children opportunity for development to the extent that they are encouraged to bring the discussion back to the point under consideration, to expect every member to take part in the discussion, to point out fallacies in the argument; in short, to the extent that they practice leadership or guidance. On the other hand, the individual discovers that he cannot always be the leader. In the discussion he finds that someone else is more able than he to judge the shortcomings of the picture he has painted; someone else has had experiences which he has not been privileged to enjoy; another calls attention to a certain side of the case which had not occurred to him. Therefore, each individual is given the opportunity to develop a willingness and an ability to follow a leader.

Group-coöperation and social harmony almost of necessity result from group discussions if they continue over a period of time. The length of time required to develop genuine group coöperation depends upon the composition of the group. However, a group working on a unit already has a common interest, already shares responsibilities, and works toward a common goal. Give such a group an opportunity to share their experiences with others and to check results, and greater coöperative effort is one of the natural outcomes.

Discussion develops critical thinking among the individuals of the group. The child insists upon a clear interpretation of the matter in hand; if there is disagreement, he insists upon establishing the truth, if possible. He is among his contemporaries, he knows what he thinks and what other members of the group think, and if it can be done, he wants some conclusion reached, or some decision made.

In the discussion of an experience or of a picture or of some other common interest, questions are raised which require that new knowledge be gained. New interests and curiosities are aroused and individuals are inspired to put forth greater effort in the new field which has been opened.

In the discussion the teacher and class often find leads which determine the next step in carrying on the work of the group. In an interesting discussion children ask questions and express themselves freely. The teacher adjusts the program to meet their interests; she helps them to find materials which will answer their questions. For instance, in a fourth grade the children had been working on a unit about toys. In looking for information in the library they found books on puppets and marionettes. They read many stories about toys, among them the *Velveteen Rabbit* by Marjory Williams. In discussing these stories one small group expressed a desire to make marionettes and play the *Velveteen Rabbit*. They worked for a few days but were not satisfied with their puppets. Then D. said, "Why don't we play it ourselves?" The whole class became interested. They submitted scenes which they had written. These were read to the group and the best parts selected. Later they chose their characters and tried them out. They gradually built up the stage settings as the play grew and they began to see the background for their scenes. They painted a frieze which they used as a part of the background in most of the scenes. They made and painted trees and bushes and tall blooming flowers for the garden scene. With a little guidance from the Household Arts department they designed and made their costumes. After a period of five weeks' work, they presented their play to the whole Elementary School.

Last year's fourth grade devoted a short period daily to the discussion of current happenings. A good unit of work began when Carol read a clipping from the paper about the famine in China. Some of the questions asked were, "What is a famine? Where is China? Why are there so many people in China?" Many of the questions could be answered at once, others were taken down by the class secretary, and a committee was appointed to find the answers. The next day one of the boys, whose mother had lived in China for two years, brought some lovely Chinese things. Then the question was asked, "Why do they have such nice things, if they are so poor?" This brought up the whole question of Chinese culture, and of the age of their civilization. The interest in China continued and grew from day to day. After a few days' study, a child asked, "Why can't we send some money to China?" From that time on, along with their study of the country and its people and customs, the group was

making Chinese things to sell. They made pottery, block prints and, near the date set for the sale, rice cookies. They cooked and served a Chinese dinner. From their sale they realized seventy dollars for the famine fund.

Many more illustrations of group discussions could be given, but from the four given here it can be seen that from such meetings develop:

1. A greater confidence in oneself.
2. A more open-minded attitude toward other people's opinions.
3. Qualities of leadership.
4. A willingness and an ability to follow a leader.
5. Group coöperation and social harmony.
6. The habit of thinking critically.
   The ability to formulate problems.
   The ability to weigh and consider.
   The ability to make conclusions, decisions, judgments.
   The ability to test conclusions until truth is known.
7. New interests and curiosities.
8. New individual standards; new group standards.
9. New leads which determine the next step in the work of the group.

IV. TEACHER'S PLACE IN DISCUSSION

What is the teacher's place in these discussions? The teacher is a member of the discussion group, and because of a fuller and richer experience in training and in study and in living, she should be the most competent to guide. Under the teacher's guidance the group is constantly raising its standards. There are many occasions when suggestions will be made by the child which the teacher, with the other members of the group, will follow. She will recognize a worth-while goal set by the children's interests, and will help the group reach that goal. Again, she will, in some cases, set the goal. Dr. Dewey thus expresses this idea:

> If the teacher is really a teacher, and not just a master or "authority," he should know enough about his pupils, their needs, experiences, degrees of skill and knowledge, etc., to be able [not to dictate aims and plans] to share in a discussion regarding what is to be done and be as free to make suggestions as any one else. . . . It goes without saying that a teacher may interfere and impose alien standards and methods during the opera-

tion. But as we have previously seen, this is not because of bringing to bear the results of previous experience, but because the habits of the teacher are so narrow and fixed, his imagination and sympathies so limited, his own intellectual horizon so bounded, that he brings them to bear in the wrong way. The fuller and richer the experience of the teacher, the more adequate his own knowledge of traditions the more likely is he, given the attitude of participator instead of that of master, to use them in a liberating way.[1]

V. TECHNIQUES USED BY TEACHER AND PUPILS

Some of the techniques which are used by both the children and the teacher in achieving the above outcomes are the following:

Teacher and Pupils

To call attention to the good points of the contribution.

To direct frequent questions to the more inactive members of the group.

To encourage pertinent discussion during the presentation of a report given by an individual or by a committee.

To encourage remarks relating to the subject in hand.

To encourage and respect any expression of honest opinion.

Pupils

To direct questions to the other children in the group, as well as to the teacher, who is only one member of the group.

Teacher

To hold private conferences with individuals when necessary.

To give special references to those members of the group who need help. Each child is given the opportunity to present something.

To encourage expression of all points of view by presenting both sides of a disputed question.

To encourage the seeking of the truth where facts are known. The teacher may find it necessary to suggest and to arrange time for:

Consultation with other groups and other grades.

Consultation with other faculty members.

Consultation with other authorities in the field of authoritative publications (teacher may have to locate the reference books).

[1] "Individuality and Experience," *Journal of the Barnes Foundation*, January, 1926.

Giving demonstrations.

Performing experiments.

To keep the class to the main point by asking a question or making a suggestion. She calls for frequent summaries to find out where the class is, and to see what is left to be done.

To encourage the expression of ideas and questions which are associated with the subject. Through expression of associated ideas, the unit is enriched. Then, too, the teacher may find a real interest expressed by an individual which he had not before manifested, or she may find a new lead for the group.

THE OUTLOOK IN SECONDARY EDUCATION

III. A LIBERAL EDUCATION*

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THERE have been many definitions of a liberal education. Many writers define the product of a liberal education. Others define its aim. Others define the elements of which it should be composed. A few define the process of imparting it.

Among the definitions of the kind of man whom a liberal education should make, some of the most penetrating are by English writers. The gift of portraiture, which finds expression in many of the best English essays, novels, and pictures, leads some of our writers on education to delineate the characteristics of a liberally educated man rather than to discuss the methods of teaching which may be expected to produce him. They visualize their man as they hope to get him and slur over, or deal very sketchily with, the methods of his production. Take John Henry Newman for example. Evidently he had living people in his eye when he described the product of a liberal education. He thought of John Davison, who had been a Fellow of Oriel in the generation before Newman's time. He thought of Copleston, who was its Provost. Through his mind there passed a gallery of gentlemen—urbane, judicious, and, as he was fain to admit, rather pale in religious conviction—men who had been brought up to think enthusiasm impolite and to distrust, both for themselves and for other people, any impulse to thoroughgoingness on fundamental things. Newman had a poet's eye, and when he set himself to think what should be the product of a liberal education he saw people whom

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he had known and watched, and based his definition upon them. This led him into a quandary. When he had described the characteristics of the men whom he had thought typical of an English liberal education, he found that they were lacking in something. You can hear him ask himself what it can have been that the English liberal education, which he praised so much, had left out. He finds that what is missing is zeal for religion. And so his definition of the product of a liberal education is in two parts, which we have to put together in order to understand his full meaning. He describes first the marks of an educated gentleman: "a cultivated intellect, a delicate taste, a candid, equitable, dispassionate mind, a noble and courteous bearing in the conduct of life"; then he remarks that these qualities do not by themselves give us power "to contend against those giants, the passion and pride of man"; bids us remember, therefore, how much else is needed as a guarantee for conscientiousness, still more for sanctity—how for that a man needs belief which has impregnated the character with a sense of the divine mysteries and of human frailty, and of the duty of unselfish service—but he ends by leaving it to us to blend these qualities with the other characteristics which an educated gentleman should possess.

I

The view which Newman took is shared by Bishop Gore. "A man," he once said, "may be educated in history and educated in science, and still lack something, vague but of extraordinary importance, without which he can hardly claim to be called a really educated man. An educated man, by means of art or music or poetry or by some other means, must nourish in his soul a sense of the Eternal, a sense of that which was and is and evermore shall be, lying beyond all changes in human history and natural progress. This transcendental emotion is possible to the adherents of almost any conceivable creed; it is common to Herbert Spencer and Hegel, to Plato and St. Paul, but without it a man is without something so essential to human worth that he can hardly be called educated."

More realistic than Newman, more graphic than Gore, was Huxley. "That man has had a liberal education who has been so trained in his youth that his body is the ready servant of his will, and does with ease and pleasure all the work which as a machine it is capable

of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength and in smooth working order; whose mind is stored with a knowledge of great and fundamental truths of nature and of the laws of her operation. One, who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learnt to love all beauty, whether of nature or of art, to hate all vileness and to respect others as himself."

These are descriptions of a liberally educated man as seen by three representative Englishmen, each of them, as the English are wont to be, a capable man of affairs, interested therefore in what a man does as well as in what he knows, but one of them by nature primarily a poet, the second a student, the third a scientist. Each in his different way believes that in the outlook of the educated man there must be an element of awe, whether he be, as in Newman's picture, delicately sensitive to the good manners of his time; or whether he be, as in Bishop Gore's picture, representative of one or other of the many variant types of culture found in our less settled age; or whether he be, as in Huxley's vivid sketch, first and foremost a man of science, alert but self-controlled, no narrow specialist but a lover of beauty in all its forms, fierce but compassionate, and respecting others as he respects himself. What in Newman's picture comes from Christian belief and in Gore's picture from what he calls transcendental emotion, in Huxley's comes from "fire." All three hold that the educated man will have, as Wordsworth said

"in least things an under sense of greatest."

A liberal education, though directed in the main to a man's use in the world, must not be altogether *this-worldly*. It must correspond to the nature of man; and in man's nature there is an incalculable element, something inscrutable, liable to explosion, or even to eruption, as if we were volcanic soil. Some of man's instincts, of his cravings, his questionings, and even of his discontents, point to there being a side of personality which lies open to something otherworldly, mysterious and unseen, or to be connected by hidden passages with it. For this reason (you will remark), any definition of a liberal education which has been strictly measured to the intellectual standards of a particular period; that is to say, which has been

designed to enumerate the accomplishments expected from a cultivated man or woman at that period, and to indicate the manners and bearing which their contemporaries would admire, is judged by later generations to be inadequate and to have left out something which is of permanent value and significance, though it may be vague and undefined.

II

Of late a change, a significant change, has crept over our customary view of the place which liberal education should hold in English national life. Old notions of its being necessarily an exclusive thing, of its being in the main a class privilege, have been fading. We ask ourselves whether a liberal education might not be brought effectively within the reach of everybody; whether it could not be so widely diffused as to become more of a general possession and less of a deposit of culture guarded by a rather limited number of favored hands; whether we should not be wise to think of it not as a guarantee of fitness to enter upon a profession but as an atmosphere in which all the relationships of life may take on a deeper meaning and lose much of the monotony or staleness of routine.

Toward this new view of what a liberal education might be and of what it might do for the common good, our thoughts seem gradually to be turning. I am far from meaning that the new outlook is shared by everybody, or that even those who see this new hope for the future would claim to have thought out all that their hope implies or what will have to be done before it can be realized. But the change in opinion is not the less significant because it has come gradually after many slow steps along the road of widening educational and social opportunity, and because in many cases it has gently altered an old attitude of mind rather than wrought any sudden or conscious conviction. The change has very little to do with party propaganda, though leading men in all parties have put into words what was rather dimly floating in our minds. Mr. Tawney, for example, has written a book on *Secondary Education for All*, and about three years ago Lord Eustace Percy said at Edmonton that "we must maintain and preach always the fact that a liberal education, a humane education, is necessary for all the walks of life." The

change which is coming gradually over our accustomed view of the province of liberal education is due, I think, to something deeper than political suggestion, to something which is even more fundamental than the shifting of economic forces. It is a sign that a new social ideal is shaping itself and is making us conscious that sooner or later our long-standing habits of education will be obliged to adjust themselves to still uncharted needs, now for the first time beginning to be felt, however vaguely and indecisively, by the community as a whole.

We cannot feel surprise at a new social ideal having an effect upon the educational habit which sprang from an older view of what the community should do for its citizens and of what every citizen owes to the community. Men's ideas of a liberal education have always been colored by the social outlook of their time. And the transition from the ways of thought engendered by a social order once paramount but slowly falling into decay is always made through a mist of compromise between obscurely conflicting forces neither of which is strong enough to assert full authority. This is the position in which we in England, and not we alone, find ourselves at the present time. An old order seems to be passing but we cannot yet discern clearly the features of the new order which by slow degrees will take its place. Hence our educational compromises are inevitable. But, knowing what the situation is and how uncertain are many of the factors which it conceals, we work on, not discouraged, through gradual readjustment toward something which we hope will be better than anything we have had before.

If we let our thoughts travel over the past, we see that many times in history men's ideas of a liberal education have been changed in gradual conformity with changes in their ideas of what is good for the community as a whole. In the Greek world Aristotle was one of the pioneers of liberal education. In place of neglect of culture and in place of slipshod ways of training the young, he wanted the birthright of free citizenship to carry with it an obligation to rigorous discipline for the discharge of duties to the State. The free citizen should receive a stringent education not only as a privilege but as a duty. Education should be a badge of a free man's obligation to promote the welfare and good government of his city. The free man's education in Aristotle's view was a liberal education.

It should give liberty of body and liberty of mind. It should train him to make good use of leisure for the self-education of later life and for shaping policy through free discussion. By this obligation to be liberally educated, for public not for private ends, the free citizen would stand apart from the mechanic, whose training was for servitude, not necessarily an unhappy servitude, instead of for the different responsibilities of civic freedom. Aristotle was careful to point out that in the Hellenic world of his time there were many kinds of constitution, and consequently many different social ideals, and therefore different ideas of a liberal education. For us, Aristotle's ideas, which were the ideas of a reformer and not of a reactionary, are vitiated by the exclusiveness of their social application and also by their economic presuppositions. What we have to thank him for is his analysis of some of the elements of which a liberal education consists; namely, the foundations of humane studies (reading and writing), the practice of the body to grace and rhythm, and the imparting of a love of beauty, and for his brave contention that in a liberal education practical utility has a place. But we cannot brook the doctrine that a liberal education should be a sort of Royal Enclosure, entered only by a privileged minority. The Aristotelian view of society—that of a liberally educated leisured class served by the unprivileged who are illiberally trained for humble though necessary functions—has broken down at the bar of history. But it corresponded only too well with the convenience of the classical world, and its ghost has haunted English education.

Another adjustment of educational ideas to social structure was slowly achieved during the Middle Ages and as slowly became obsolete. The mediaeval conception of a liberal education rested on the seven liberal arts. An old Latin tag served as a *memoria technica* to recall their names and order. Grammar teaches us the art of speech; dialectic, how to get at truth; rhetoric teaches us the color of words; music teaches us melody; arithmetic, the laws of number; geometry, the laws of volume; astronomy, the movement of the stars.[1] The liberal education of the Middle Ages aimed at the salvage of learning in a turbulent society. It secured a tradition of culture in a world often shaken by violence. It knew no social distinc-

[1] Grammar, *loquitur*; Dialectic, *vera docet*; Rhetoric, *verba colorat*; Music, *canit*; Arithmetic, *numerat*; Geometry, *ponderat*; Astronomy, *colit astra*.

tions. It aimed at training those who were fit for letters to guard letters against the dangers which encompassed them. When learning was besieged, the seven liberal arts were its citadel. The mediaeval tradition preserved culture in a time of jeopardy. Aristotle's distinction between the free man and the slave had almost entirely disappeared. A new distinction between the man at arms and the clerk had emerged.

The Christian Humanists of the fifteenth century in Italy attempted to bridge the gap between the education of the clerk and the training of the man at arms. Best of them all, Vittorino da Feltre, sought to humanize the education of the court, to make letters courtly, and to forge links between the high-born and the humble by educating with the children of the Duke some boys and girls of talent from humble homes.

When Luther and the Reformation had claimed a stint of education for every boy and girl and when the Counter Reformation had shown that not Protestants alone were sensitive to the educational claims of the poor, Comenius, the Moravian, a sufferer like St. Paul from many kinds of hardship, disclosed the ideal to which the modern world responds; namely, that "all human beings should have a training in all that is proper to their common humanity." Toward this purpose, though with slow steps and through many defeats, the world is moving. Its realization is delayed by selfishness, by fear of competition, by color-prejudice, by defects of method, by lack of pence and of peace. But it has become a beacon toward which we steer.

Thus from Aristotle we may learn that a liberal education must not disdain utility but transmute it into an instrument of culture; from the mediaeval teachers of the seven liberal arts we may learn the necessity of hard work upon the elements of learning during the years of apprenticeship to a liberal education; from Vittorino, the gain which rich and poor may win from sharing in a strict and noble discipline of body and mind: and from Comenius that the essentials of a liberal education should be "in widest commonalty spread."

III

In but few of the definitions of a liberal education do we find any trace of the author having thought as closely of what the man when liberally educated is to do for the community as of what a

liberal education when he has got it will have done for him. Still fewer of the definitions fix our thoughts upon the part which the influence and the sacrifices of the community bear in the giving of a liberal education alongside of the efforts which every student must in all circumstances make to win its benefits. A strong flavor of individualism pervades the definitions of a liberal education. They pay little regard to the bearing which liberal education should have on the welfare of the community; still less do they throw light on the question: What in a liberal education are the essential things which might be generalized for universal use and enjoyment? For finding the answer to this question, the older writers rely on religion. Many moderns, leaving religion out of account altogether, allow the question to remain unanswered.

Thus in most cases the communal benefits of a liberal education are taken for granted—rashly taken for granted because many kinds of liberal education are of necessity specialized and of any kind of specialized product there may be overproduction in relation to the needs of the community and its economic position. Yet the definitions imply that one may assume, without further inquiry or argument, the power of the community to assimilate everything of the nature of liberal education which any number of its members may receive. George Gissing makes the hero in one of his novels point at Mason College, Birmingham, as "a place where young men are taught a variety of things, including discontent with small incomes."

Sir William Hamilton said: "A liberal education is designed to prepare man as an end; a professional education to prepare him as a means or instrument." Sir William would admit that the same person may receive the two educations end on, but to distinguish them in this Aristotelian fashion is to suggest that a professional education in one or other of its multitudinous forms must be the lot of the great mass of mankind and that a liberal education, purified of any taint of utility, must be confined to the favored few who can afford a costly and protracted sublimation, and have no reason for being in a hurry to earn their own living.

And James Russell Lowell: "A liberal education emancipates a man from any narrow provincialism, whether of egoism or tradition, and is the apprenticeship which every one must serve before becoming a free brother of the guild which passes on the torch of life from

age to age." Do we not here again get a suggestion of exclusiveness, of selection, of separation from the mass of a man's fellow citizens, especially as Lowell identifies a liberal education with a course of study which is remote from the common tasks of life?

Or Mark Pattison: "A liberal education liberates the true man in us from the shackles of human prejudice in which untrained minds are hide-bound all their lives."

The danger of a liberal education, detached from the common lot, is that it may make the man who receives it unduly fastidious, absorbed in rather selfish study and a little frightened by the rough and tumble of practical life. Against these dangers many of the definitions of a liberal education do not put us on our guard.

A liberal education, after long and searching discipline, and at great cost of toil and pain, may at the last bring to a man a kind of release. And, with that release, serenity of mind. But this is not the outcome of any one privileged course of liberal culture. Faraday attained to it as well as Goethe; William Carey, the shoemaker, attained to it as well as Henry Sidgwick, the college don. And this release and serenity come to many men and women in humble and inconspicuous ways of life, to men and women of deep human and spiritual experience, of whom nevertheless it is true that "Words are but underagents in their souls."

The most famous of all definitions of a liberal education is Milton's: "I call a complete and generous education that which fits a man to perform justly, skillfully and magnanimously, all the offices, both private and public, of peace and war." No words ever written make a more stirring appeal to the reader to fix his thoughts on the fulfilment of a man's duties in life as the supreme aim of a liberal education. But Milton's course of training, planned to achieve this end, was too onerous for ordinary minds, too costly for any slender purse.

The contexts of Milton's *Tractate* bring us to the third group of definitions—those which name the elements of which a liberal education should consist.

IV

Matthew Arnold's definition is the most far-reaching of the moderns; in reality it is even more extensive than the encyclopædic

program of Comenius because of the weight of new knowledge which would now fall upon the student. For it must include (to a degree which Matthew Arnold did not himself realize) physical science as well as letters, economics as well as political philosophy. "What a man seeks through education," wrote Matthew Arnold, "is to get to know himself and the world. For this knowledge, it is before all things necessary that he acquaint himself with the best that has been thought and said in the world." To get a broad view of your subject on first entering upon its territory is inspiring. Some University professors give it to their students. Again, to climb to a point of wide prospect when one has already gone far into a subject, so as to see its frontiers and the lie of the land in neighboring fields of study, is profitable. Mr. H. G. Wells is one of the men who have helped us to realize the value of a panorama. But a boy or a girl or an undergraduate may be the worse and not the better for having to submit to the strict accountancy of a written examination on a mosaic of subjects in an encyclopaedic program of study.

Locke, as always, writes with good sense about this difficult question. "The business of education," he says, "in respect of knowledge is not to perfect the learner in all or any one of the sciences, but to give his mind that freedom, that disposition, and those habits that may enable him to attain any part of knowledge he shall apply himself to, or stand in need of, in the future course of his life." The defect in this definition is that it implies that education ends on the threshold of a man's adult duties.

Ruskin had, I think, a deeper insight into the fundamentals of national education than any other Englishman of his time, but his temper was fretted by failure to get himself understood and he often spoiled his case by tempestuous diatribe. For example, in a chapter on the future of England in *The Crown of Wild Olive* he defines true education as "not teaching the youth of England the shapes of letters and the tricks of numbers; and then leaving them to turn their arithmetic to roguery and their literature to lust; but, on the contrary, training them into the perfect exercise and kingly continence of their bodies and souls." These remarks, if made to the members of a City Education Committee assembled at a meeting with the usual agenda, would not be persuasive.

But Ruskin's definition of a liberal education is one of the few

which look beyond the individual to his part in the life of the community and which put self-training in its right position as compared with training passively received. "An educated man," Ruskin writes, "is one who has understanding of his own uses and duties in the world and therefore of the general nature of things done or existing in the world, and who has so trained himself, or been trained, as to turn to the best and most courteous account whatever faculties or knowledge be his."

Still nearer to the point of view which I desire to commend to your consideration is a passage in which Ruskin writes: "I believe every man in a Christian Kingdom ought to be equally well educated." This paradox does not mean that he thinks all men equally gifted or equally educable. The opposite was his belief. But he has a vision of a liberal education in which all may share, of a fountain to which all may come. "I believe every man in a Christian Kingdom ought to be equally well educated. But I would have his education to purpose; stern, practical, in moral habits, in bodily strength and beauty, in all the faculties of mind capable of being developed under the circumstances of the individual, and especially in the technical knowledge of his own business; but yet infinitely various in its effort, directed to make one youth humble and another confident; to tranquilize this mind, to put some spark of ambition into that; now to urge and now to restrain."

At this point we come to the stage in the argument when we should ask ourselves why anyone should wish to see a liberal education made accessible to everyone.

The answer which, I suppose, Huxley would have given to this question (at any rate the first answer which would have sprung to his lips) is that talent and character, however humbly born, should be given opportunity to realize themselves to the utmost and therefore should not be denied the early training upon which the unfolding and timely flowering of gifts of mind, especially in retiring and unselfish natures, in most (though not in all) cases depend. Let us leave, as Ruskin said, no Giotto by the sheepfolds. Not only genius but powers much less than genius are precious for the welfare of the race. Therefore we should remove, so far as may be, obstructions which hamper or choke their growth. This argument has not lost its force. Talents should not be buried.

The Victorian reformers were fighting against odds for more education. In their propaganda, therefore, they thought it discreet not to make points which might be used against them by intelligent adversaries. For this reason they said much less than the facts entitled them to say about the power of great ability to rise above untoward circumstance. They knew that, at the very time when our supply of schools was pitiably in arrear, England had blazed with genius, much of it genius which owed little to formal education and yet made masterpieces in words and deeds. They knew also that Michael Faraday who saw far into the fabric of things, who thought deeply, and who both wrote and spoke with mastery of his mother tongue, was an errand boy in the East End of London at twelve years of age and served his time as apprentice to a bookseller during the formative years, at which time we should now send him to a secondary school.

Nature is not always balked by human remissness in helping those whom she has bountifully endowed. But Nature is careless of waste, and we can help Nature by lessening waste. Waste of talent was hateful to Huxley. His remedy for intellectual waste took the picturesque form of an educational ladder. But a ladder is for climbing, and "climbing" is not always the polite word to use about attempts to rise. A more romantic use of a ladder is escape. Escape from what? Some of Huxley's contemporaries thought of the educational ladder as a way of escape from the economic underworld into the sunshine of material prosperity. They had a static view of the then existing economic order and knew enough about its dark and unhealthy basement to understand a young man's desire to climb up into its well-lighted and sunny upper storey. But the true reason for giving everyone access to a liberal education lies deeper than individual advantage. It has regard to something even more powerful than the instinct of a threatened economic order of society to attach to itself, as an ally, as much as possible of the talent discoverable in the depths below.

What is it then that without imprudence we may hope to see as the result of a liberal education made universally accessible?

The danger of attempting to answer such a question is lest one should be caught up on what Tennyson called "the wings of prophecy" which generally means getting too far away from the firm ground

of facts. Educational reformers have to put up with so many disappointments that we ought not to grudge them the joys of hope. But in their sanguine moods they come it a little strong. Herbert Spencer at one time believed that, if only people were taught what he wished us to teach them, the world would soon become what it ought to be. That practical and successful manufacturer Robert Owen believed that if fatherly governments would plant out their citizens in rectangular homes of harmony, naughtiness of every kind, public and private, from war to backbiting, would vanish from the face of the earth.

But looking at the matter more soberly, judging it as an actuary would judge it, what may we think likely to follow from an attempt to make a liberal education accessible to everyone; from an effort to provide what the poet scoffingly described as

> "a universal culture for the crowd"?

Will culture be to everybody more attractive than watching a baseball game? Do we expect, as the rather prosy old man in Wordsworth's *Excursion* expected, that, if we give a liberal education to all,

> "Earth's universal Frame shall feel the effect,
> Even till the smallest habitable rock
> Beaten by lonely billows, hear the songs
> Of humanized Society; and bloom
> With civil arts, that send their fragrance forth,
> A grateful tribute to all-ruling Heaven"?

Do we believe, as Wordsworth's Wanderer believed, that these things would follow

> "From Culture, unexclusively bestowed
> On Albion's noble race in freedom born"?

Do we, as he did,

> "Expect these mighty issues, from the pains
> And faithful care of unambitious schools
> Instructing simple Childhood's ready ear"?

A hundred years hence would it sound as absurd if we were now to say that a liberal education made accessible to everyone would be likely in time to bring an infusion of greater social equality into Eng-

lish life? Within my memory the changes in girls' dress have (at any rate to the untrained masculine eye) made women who once would have worn very different kinds of raiment in the street look much more alike. A more generally diffused liberal education might in the course of years give our people a livelier sense of being members of a community. Broad common interests, and these are what a liberal education gives, do not eliminate personal friction (life even in a monastery or a college is not frictionless) but they do enhance the general amenity of existence. I am far from underrating the instinctive good sense of the English people, but should we be the worse for being a little quicker at the uptake toward new ideas? And if we were, I won't say wiser but, just a shade more alertly intelligent? Our English liberal education is so strong in fostering the habits of corporate life that one might perhaps without being oversanguine hope that, if it were much more widely diffused, we should be found capable of a little more coöperation for the common good. In a great crisis we coöperate, but in the daily round and trivial tasks of city life we seem to muddle along more than we should if we really enjoyed coöperation and were bent on getting our towns as attractive and interesting and smokeless and well planned as our public authorities would no doubt be glad to make them if only they could be sure of our backing them up and of our responding to their claims on our intelligent and cordial coöperation. The English, we know well, have characteristics which are worth much more than quick intelligence. But a fair amount of time is wasted, a good deal of discouragement is caused, by our mental reaction to new ideas being a little slow, and by our not being very quick in seeing connections between one thing and another. If these are faults, a liberal education might do a good deal toward correcting them. As Newman said, it does increase our power of "seizing the strong point in a subject" and of seeing connections.

"To love her was a liberal education," said Sir Richard Steele of the Lady Elizabeth Hastings. But I feel pretty sure that a liberal education would not make us all love one another. Nor would it do away with envy and jealousy and awkwardness of temper.

A kind of liberal education is experienced by a mechanically minded man when he first has a car. He applies what science he has, and learns more. He gets further afield, sees life from a new angle,

joins a fraternity of motorists. If he pays for his car by installments he pledges himself (like a poor man going to the University) for the sake of getting a wider horizon. Like an undergraduate he is conscious of having attained to a higher grade of social consideration. Cheap cars have carried us a little way toward a greater social equality. But there are moments when those of us who are pedestrians or tram-riders feel a twinge of jealousy at the motorist's power of going faster and farther than we can. We are fain to admit, however, that we do not really wish that cars had never been invented or that Ford and Morris had not made them cheap. And we should feel the same about the effects of a much more widely diffused liberal education.

But the names of Morris and Ford carry with them the thought of mass production. Will mass production be applied to a liberal education also? And if so, instead of preserving our native raciness of judgment, our free forest growth of different kinds of sentiment, will it standardize feelings and opinions? Mass production of culture for the crowd is not unlikely to have that effect, especially at a time when the cheap press, the films, and now the wireless are throwing a succession of similar tints upon our minds and talk, just as the talk about the races in the Hippodrome must have colored people's minds in Byzantium. So, too, the sentiments in the plays performed in the great daylight theater at Athens may have given similarity to the thoughts of the crowded audiences whose eyes were riveted for hours on the spectacle and whose ears caught the phrases of the playwrights' philosophy of life.

That we should become more *organizable* is one of the things which Coleridge thought likely to follow from our getting in England a better system of national education. He hoped that it would "form and train up the people of this country to be obedient, free, useful and organizable subjects, citizens and patriots, living to the benefit of the State and prepared to die in its defence."[2] Coleridge had been reading Fichte, and he thought, as Fichte thought, that education, nationally organized for the people, would produce a happy combination of opposite qualities. "Free" you will observe the English were to be, as well as obedient; but, in their freedom, responsive to the calls of public service and, above all else, *organizable.*

[2] Coleridge, Samuel Taylor, *Constitution of Church and State*, 1830, p. 63.

Fichte more than any other man stirred up the Prussians to try a thoroughgoing experiment in organizing liberal education, and it is to German, more than to English, writers that we have to turn for a definition of the elements of which a liberal education is composed.

V

The Germans call the intellectual outcome of a liberal education general culture. General culture is partly an assortment of many-sided knowledge, partly the aroma of discriminating judgment which is supposed to emanate from the process of acquiring it. It is the distinguishing mark of an educated man. If he is well informed in all the main branches of study—linguistic, mathematical, scientific, and humane; if he is practiced in the technique of their methods of investigation and proof; and if he has been trained in the power of expression, both in speech and with the pen, he possesses what the Germans call *Allgemeine Bildung*. This general culture they hold to be the intellectual foundation of intelligent intercourse and coöperation in a modern State. They deem it an indispensable prerequisite for those who seek to equip themselves by specialized study for any kind of professional career. For more than a hundred years the Prussian and other German States have made it a fundamental part of their policy to maintain what are called higher schools in which boys destined for the public service, for the learned professions, and for the more responsible positions in commerce and industry may acquire the elements of general culture by means of a severe course of discipline and study extending over at least six years and conducted by trained teachers of attested erudition and skill. The Germans are naturally very proud of the schools which thus provide general culture, but they are not so fond of them as most Englishmen are of theirs, nor have they in connection with them the same happy memories of corporate life.

Until the changes which followed the democratic revolution after the War took place, the German higher schools, though not expensive, were in fact the appanage of the middle and higher classes. There was an unbridged gulf between the world of the elementary school and the world of the higher school. General culture was thus the badge of the middle and upper ranks of society. These ranks

were regarded as the intellectual cement of the State. Their course of education was designed to make them, what Coleridge wanted Englishmen to be made, intellectually free and also obedient, useful, and organizable.

The key to the system is that (with rare exceptions) every boy stays for one year in a class and then is moved up with his classmates to a higher class in which he stays for a year. This process is repeated for six or nine years. And all the time the same group of boys form a unit and learn together every subject in the carefully articulated course of study which is prescribed by the government for the particular type of school. A boy has to keep up with his classmates in all the subjects which the program requires. There is not, as there is with us, a reclassification of the pupils in separate sections, with distinct lines of yearly or terminal promotion, in mathematics, in natural science, and in foreign languages. All the boys move along the same trunk line in a train of class units, each unit learning together all the subjects assigned to that year of the school course.

This system is taken for granted by most Germans, although it is very different from the English system, and it is valued because it secures a high level of average skill and attainment in all the branches of a many-sided culture. It is esteemed by government because it is the most economical way of providing a stringent intellectual training for a great number of boys by a carefully selected staff of expert teachers. It is more successful in developing powers of assimilation than originality. It induces feelings of great respect for the intellectual authority of accredited experts. It does not allow, as our system allows, for a talented boy to reach a very high standard of attainment in one or other group of subjects according to his individual aptitude. Its demands leave little time for responsibilities in corporate life. The boys are well taught but the pressure of school studies is severe—so severe that very many Germans would like it to be made less exacting and less injurious to health. Yet it is found impossible to lighten the load without abandoning the central principle of the system. In our Public Schools which are typically English, we provide first-rate opportunities for the intellectual élite but make rather indifferent use of intellectually average material. Of the typical higher schools of Germany the reverse is true. Something

halfway between the German and the English systems of secondary education might be the best system in the world.

But not through institutions like the Higher Schools of Germany could a liberal education be made accessible to the whole community. The kinds of training which they provide would not be congenial to every mind nor beneficial to every temperament; nor could they be imparted to everybody without producing on a ruinous scale what Bismarck called "an academic proletariate." Nevertheless, many-sidedness should be a characteristic of any training to which the name of a liberal education could justly be applied. We have, therefore, to find a middle way between smattering and overpressure. As a warning against smattering Locke says in his *Conduct of the Understanding* that in the course of our education we should learn what it means to "bottom" a subject, because it is only when it knows that it has got to the bottom of a question that the mind can rest in its search for truth. And we may take as a warning against overpressure, Bishop Butler's remark that "Information is the least important part of education." On the right training of the mind, which has a profound effect upon moral character, and on the use of the mind in the quest for Truth, Locke and Butler speak with preëminent authority.

What then are the elements which a liberal education should comprise?

Ten years ago when I was in India as President of the Calcutta University Commission, my colleagues asked me to write a description of a liberal education and were so good as to accept what I wrote, though they wisely added to it an allusion, suggested by Sir Philip Hartog, to what he called "the intellectual conscience." What I wrote, with that addition, is the following:

> A liberal education should be given under conditions favorable to health. The body should be developed and trained by systematic and vigorous exercise. The eyes should be trained to see, the ears to hear, with quick and sure discrimination. The sense of beauty should be awakened. The hands should be trained to skilful use. The will should be kindled by an ideal and hardened by a discipline enjoining self-control. The pupil should learn to express himself accurately and simply in his mother tongue. Through mathematics he should learn the relations of forms and of numbers. Through history and literature he should learn something of the

> records of the past; what the human race (and not least his fellow-countrymen) have achieved; and how the great poets and sages have interpreted the experience of life. His education should further demand from him some study of nature and should set him in the way of realizing both the amount and the quality of evidence which a valid induction requires. Besides this it should open windows in his mind, so that he may see wide perspectives of history and of human thought. It should also, by the enforcement of accuracy and steady work, teach him by what toil and patience men have to make their way along the road to truth. Above all, a liberal education should endeavor to give, by such methods and influences as it is free to use, a sure hold upon the principles of right and wrong. It should arouse and enlighten the conscience, the intellectual conscience and the moral. It should give experience in bearing responsibility, in organization, and in working with others for public ends, whether in leadership or in submission to the common will.

Clearly, a liberal education of this kind begins long before a boy or girl is old enough to go to a secondary school. The first and crucial steps in it are taken in infancy and early childhood. The home is the nursery of a liberal education. The primary school should contribute an essential and formative part of it. For this reason far-reaching improvements in the conditions under which many primary school teachers have to do their work, and a reduction in the size of their classes (for almost all subjects) to twenty-five at the outside, are indispensable if a liberal education is, in fact and not merely in name, to be brought within the reach of all. Nor does a liberal education end with one's schooldays, or, if one goes to a University, with one's days there. Training and self-training must be the accompaniments of later life. Thus at the very time when the desire for a liberal education is showing itself more widely in all countries, our horizon also has widened and we realize that the process of getting liberally educated can and should be spread over a much longer time than was at one time commonly assumed. A liberal education is not the appanage of the secondary school and of the University alone, but is also the business of the home circle, of the primary school, and of the varied agencies of adult education. Some wise words of Wordsworth have therefore taken on a new significance for us to-day. "Much that is precious," he wrote in 1845, "comes into our minds not as knowledge entering formally in the shape of knowledge. Let us not put

out of sight the knowledge which comes without being sought for, from intercourse with Nature and from experience in the actual employments and duties of life."

But it must have been in a mood of irritation that he exclaimed in *The Prelude*:

> "How little those formalities, to which
> With overweening trust alone we give
> The name of Education have to do
> With real feeling and just sense."

The Englishman's good sense makes him realize that education does not come from schools and colleges alone, but it is, on the other hand, one of his besetting mistakes that he underestimates what a great part good teaching, systematic study, and the intellectual tradition of fine scholarship can play in education.

Because in our education we attach too little importance to the kindling power of intellectual passion, to the flame of a desire for truth, we are in danger of spoiling our education by thinking too much about examinations and by failing to watch very closely the effect of our system of examinations on the minds both of the teachers and of those who are taught. In our educational outlook there is no blacker cloud than this. And things seem likely to get worse, not better.

By far the best statement of the danger which threatens to engulf our hopes for the future of education in England, and of the reasons for fearing that what may actually be done in response to the growing desire for a more widely diffused liberal education may hurt England by impairing her creative power, has been made by a man of very eminent authority, Professor A. N. Whitehead. He says:

> The craze for general culture had produced a curriculum of four or five subjects pushed simultaneously up to a fairly high degree of attainment. Diffusion of interest stifles the keen curiosity of the normal child and creates in many a sense of failure or inefficiency. Interest in a subject can only be sustained by allowing a great deal of time for it and by a leisurely pursuit. The problem is to select for each pupil a region, however limited, in which he can attain some excellence and can acquire that sense of doing something well which, in the venture of life, is far more potent than culture. Education is not merely a problem of knowledge

> which can be solved by the implantation of inert ideas—that is of ideas not energized, not utilized, not enjoyed. But all the machinery of public administration is directed toward producing a good average of measurable efficiency—that is of efficiency assessed by the measurement of inert ideas.

For the reason which Professor Whitehead thus enunciates, I feel very grave concern about the future of English education. Public administration is indispensable, and we all know how well-intentioned are our English administrators. But the momentum of a great machine of examinations pushes us, helplessly I fear, farther and farther along the wrong road and farther and farther away from the possibility of making English education consonant with the creative faculty of many English minds. Inert ideas are at a premium. To implant them is the cheapest way of giving what looks like a liberal education. But inert ideas are a blight on the mind and on the individual judgment.

A liberal education should make us sensitive and keep us creative. Unless it keeps us creative it is disabling. The more widely we spread the disabling kind of education, the more we weaken intellectual and moral power.

A note of discouragement, however, would be very far from expressing my true feeling about the outlook in secondary education in the modern world. Within my memory things have changed marvellously for the better. The change, like all changes, has a shadow-side. There has been some loss (by no means due mainly to the schools but to deep causes which have touched the thoughts and faiths of men), and yet, so far as educational opportunity goes, the gain has been enormous. For this we are thankful, thankful not least to the influence and liberality of the United States. But in older countries we shall have to be content to advance gradually. Only by patience and constant effort shall we realize our hopes. Our public opinion does not yet fully comprehend what is involved in the purpose to secure for all citizens the opportunity of enjoying and profiting by a liberal education. It is not yet prepared for, perhaps not yet able to sustain, the real cost of transfiguring the conditions under which the work of our primary schools is generally done. But this basic change is indispensable to the realization of the hopes which the nation has conceived.

We may congratulate ourselves on the fact that the old idea of a liberal education being a privilege for the few has been given up and that it has been replaced by the new idea of making a liberal education accessible to everybody. A liberal education is an education for liberty. In a free state it is a necessary part of the charter of freedom. Boys and girls, rich and poor, should enjoy opportunities of receiving it in the form best adapted to individual temperament, psychological growth, and innate capacity. To spread liberal education "in widest commonalty" is the central and distinctive aim of educational policy in a modern democratic community.

But of all social reforms this will be the most difficult to achieve. Its attainment will, I think, involve a degree of discipline which is at present unpopular and a freedom of opportunity which in older countries is at present not yet enjoyed. Our first attempts to secure a liberal education for everybody may result in some disappointing and even sterile substitute being provided for many of the rising generation—partly because through use of the mechanism of public tests designed to select an élite and to stimulate the industry of pupils and teachers, we may inculcate inadvertently too many inert ideas, partly because we ourselves cannot yet be sure wherein the living principle of a liberal education for everybody will certainly be found. Perhaps, in our ideas of a liberal education, we still think too predominantly in terms of mental training and have not yet given sufficient thought to the place which the training of the body through muscular control of hand and eye, of trunk and voice, should occupy in the development of powers of mind. Perhaps rhythm of movement of speech and song; balance and grace; the arts of music, drama, and of vivid self-expression in conversation, in recitation, and in oratory, do not yet figure largely enough in our conception of a liberal education. Perhaps, in spite of all the changes which have transformed our ideas of education during the last fifty years, we are still too much under the influence of the literary bias of the mediaeval and humanistic schoolmen, and have still something to learn (though with steadfast loyalty to Christian restraints on conduct) from the practice and ideals of the ancient Greeks.

But we can go forward with rejoicing at what has already been achieved and with confidence that by slow degrees we shall come more nearly to the attainment of our hopes. We realize that a liberal

education is a discipline of body, mind, and spirit; a discipline which is not individual only, but also communal. Our eyes have been opened to the truth that the angle of a liberal education subtends the arc of life from the nursery to old age. We perceive that the presence of a liberal education is not signified exclusively by any label, certificate, or academic degree; above all, that a liberal education does not mean the absorption of inert ideas in cramming for an examination. It is evinced in an attitude of mind liberated from apathy and from self-will, in an attitude of mind toward life, work, duty, and the realities of belief. In it are blended freedom and discipline; questioning and awe; the education of the body and the education of the mind; training and self-training; science and letters; preparation for livelihood and for leisure alike.

EDUCATIONAL TOURS IN EUROPE

FIVE unusual opportunities to study and to travel abroad are announced by the International Institute of Teachers College, Columbia University.

Trips are planned to Germany, Russia, and France during the summer of 1931 and to England in 1932. They are sponsored by the International Institute coöperating with the Zentralinstitut für Erziehung und Unterricht in Germany, the Pedagogical Department of the Second University of Moscow, and the Ministry of Public Instruction in France.

University credit will be granted to participants in these tours provided the requirements for credit are met.

The purpose of these trips is to provide American teachers with direct insight into the life and organization of foreign school systems. The work is so organized, however, that liberal opportunity is afforded members of the groups for intimate contact with many other phases of life and culture in foreign countries, such as music, art, drama, industry, agriculture, commerce, and politics. Definite provision is made for these phases of culture in the countries visited.

Under the guidance of foreign educational leaders, these trips offer most unusual opportunities to see schools in operation. This expert guidance ought to make the tours doubly attractive since it is not often that such opportunities are made available to foreign visitors.

GERMAN TRIPS

Two trips to Germany are planned. The Prussian Ministry of Education renews its invitation to a group of American educators to travel for six weeks in Germany and to study German education.

This tour will include visitation to many important German cities, among which will be most of the following: Bremen, Hamburg, Kiel, Lübeck, Berlin, Magdeburg, Erfurt, Frankfurt am Main, Heidelberg, Mannheim, Koblenz, Düsseldorf, Essen, and Hannover.

All types of German educational institutions will be seen—elementary schools, secondary schools, rural schools, vocational schools, community and country boarding schools, teachers colleges, universities, and folk universities. All types of education will be observed—physical education, art education, dramatics, the Youth Movement, school organization, methods of instruction, outdoor life, playgrounds, and juvenile welfare.

While some of the visitation will be done in groups, the specific needs of each member of the party will be carefully considered. Each member will have the privilege of visiting those types of educational work which are of greatest interest and value to him. It will thus be possible for any member to study a special problem under careful guidance. Discussion groups will be organized as needed. Ample free time for sight-seeing and recreation will be allowed.

The total cost of the trip in Germany together with the ocean transportation to and from America amounts to a minimum of $650 to $700 depending upon the class of boat used. If credit is desired, $70 must be added to this amount.

The department of Natural Science of Teachers College, together with the International Institute, announces a science tour to Germany for teachers and students of science who are interested in studying not only how science is taught in the German schools, but also the biological and geological phenomena of various regions in Germany.

The itinerary includes a journey by steamer on the Rhine, walking tours in the Black Forest, the Bavarian Alps, and Saxon-Switzerland, and visits to several German cities, among them Düsseldorf, Cologne, Munich, Dresden, Berlin, and Hamburg. Phases of science education as seen in progressive schools, school gardens, school country homes, and museums will be observed. An unusual opportunity is offered for professional study and, at the same time, for gaining some acquaintance with rural and urban life and customs of the German people. Baggage is an important item because much hiking will be done. Suggestions for equipment will be mailed to each member of the course after registration. Overnight accommodations will be provided in German Jugendherberge (youth hostels) and in small but satisfactory hotels. Third class railroad trains will be used in Germany and tourist third steamship accommodations to and from Germany.

Members of the party will sail from New York on or after Saturday, June 20. One hour each day on shipboard will be devoted to discussion and conference on the material necessary to provide good background for the course.

The expense of such a trip is purposely kept low; it exceeds only slightly the cost of a summer of study in New York City. The total cost of the round trip, including tuition and complete travelling expenses, is $550. Of this amount, $75 is payable upon registration, to Dr. Thomas Alexander, International Institute, Teachers College, as registration fee and as deposit on the steamship passage. The remaining $475 is payable one month before sailing.

RUSSIAN TRIP

The International Institute of Teachers College, Columbia University, in coöperation with the Pedagogical Department of the Second University of Moscow, announces a Russian Educational Tour for the summer of 1931.

The Russian tour will begin in Moscow and will include a trip to Leningrad; then either a Volga River trip embracing Nizhni Novgorod, Kazan, Stalingrad and Baku, or a more directly southern route to Kharkov, Rostov-on-Don, Yalta, Odessa, and Kiev.

All types of Russian educational institutions will be visited—elementary and higher schools in both cities and villages, crib and nursery schools, children's camps and colonies, Young Communists' camps, agricultural schools, factory social agencies, mining schools, sport clubs, houses and parks of culture, institutions for the requalifying of teachers, museums and galleries, excursion bases, and children's theatres.

It is planned that the first few days will be spent at the Second University of Moscow where lectures (in English) will be given by Russian educators, in which the Soviet conception of education will be set forth and the different types of educational institutions explained.

American educators who contemplate joining the group must know that travel in Russia is more difficult than in Germany, France, or England. Actual train travel is not so comfortable as that in

other European countries, nor are the hotel and restaurant accommodations so satisfactory.

The cost of this trip can be roughly estimated at $1,000.

FRENCH TRIP

The purpose of this summer tour to France is to provide American school executives, supervisors, and teachers with direct insight into the organization and life of French schools. It will give an unusual opportunity to study the rather complex mechanism of the French State educational system.

Practically all the schools of France—elementary, secondary and higher—are under the direct control of the central government. The system has the advantage of unity of curriculum, programs and appointment of teachers. Therefore, it will be possible during a relatively short visit to become acquainted with the whole educational system; namely, its origin, its purpose and aims, its methods and scholarly traditions. Furthermore, this tour will enable its participants to have intimate contact with other important phases of French life and culture, such as music, art, drama, industry, agriculture, and commerce. As a group, the members of this tour will be given, with the help of educational authorities, a freedom of information which is usually difficult to obtain under the highly centralized system of French public instruction. Individual interests will be taken into consideration and provision made for the study of special problems. For those who are interested, opportunity will be offered during the six weeks to study schools in Switerland or Belgium.

The total cost of the tour to France will be approximately $600 or $700, exclusive of University tuition.

ENGLISH TRIP (1932)

The purpose of this trip is to provide American teachers with direct insight into the organization and life of English schools. The trip is to be so organized, however, that liberal opportunity will be afforded to members of the group for intimate contact with many other phases of English life and culture, such as music, art, drama, industry, agriculture, and commerce.

The tour offers a most unusual opportunity to see English schools. All types of English educational institutions will be visited, such as progressive country boarding schools, elementary state schools, secondary state schools, industrial centers, English Public Schools, nursery schools, central schools, rural schools, settlements, adult colleges, universities, psychological clinics, and teacher training colleges. There may also be a chance to visit some Scottish schools in Edinburgh and Glasgow.

The total cost of the tour to England will be approximately $600 or $700, exclusive of University tuition.

For further information regarding the Science Trip to Germany, address Dr. S. R. Powers, Department of Natural Science, Teachers College, Columbia University, and for information regarding the other trips, address Dr. Thomas Alexander, Teachers College, Columbia University, New York City.

NEW STUDIES IN EDUCATION

AN ANALYSIS OF SPELLING ERRORS*

A STUDY OF FACTORS ASSOCIATED WITH WORD DIFFICULTY

THE purpose of the writer's investigation was to discover common difficulties in spelling. The information from such a study may prove of real value in devising an effective learning program; it may suggest procedures for building correct spelling bonds and for eliminating incorrect ones.

PROCEDURE

The pupils tested were in attendance at Public School No. 165, Manhattan, New York City. The word lists used were based upon combined lists of words appearing in seven spelling textbooks, written by recognized authorities in this field (a study by Dr. Gates). From the complete list of 4,500 words, 2,300 words were chosen. From 300 to 500 different words were administered to about 100 pupils at each grade level. A wide grade range, Grades I-VI, permitted comparisons between performance at one level and that at another. The list of words given was one grade level above that of the pupils tested; that is, a fourth grade list was administered to pupils in Grade III, etc.

OUTCOMES OF INVESTIGATION

The outcomes of this investigation into the nature of spelling errors can be stated briefly in the following points.

1. Omission of letters (37 per cent of the total) and the substitution of letters (48 per cent) are the most prominent types of errors.

2. Although the confusion of words proves a source of real difficulty in Grade I, thereafter it is of much less significance.

3. Homonyms tend to cause more difficulty in Grade II than in any other grade.

4. The particular misspelling that occurs most frequently includes approximately 32 per cent of all misspellings for a word.

5. In general, the hard spot of a word is located either at the center or immediately at the right of center. The initial letters of a long word are respectively no more difficult than those of a short word.

6. The early syllables of a word are consistently easier to spell than the later syllables.

7. Difficulty tends definitely to be associated with particular letters of the alphabet; for example, with the vowels, "e," "a," "i," and "u."

8. The length of word and the number of vowels are only slightly associated with difficulty. The presence of syllables, the placement of accent, and the confusion of words bear no consistent relationship to difficulty.

9. In Grades I-VI, approximately 50

* By James E. Mendenhall, Ph.D. Teachers College, Columbia University, Lincoln School Publication.

per cent of all misspellings are reasonably phonetic in character.

10. Many authorities in spelling discourage the use of methods in which words are grouped by similarity of visual, auditory, or other elements.

11. A final classification of words by types of errors shows certain common tendencies; for example, (*a*) the *omission* of the second of a double letter, of a final letter, of silent letters, of key consonants, and of central syllables; and (*b*) the *substitution* of other words for the correct ones, and of other vowels for the correct ones in the second syllable of words. The most frequent vowel sounds (for example, the sound of long "a") exhibit definite trends in error.

SUMMARY

Summing up the foregoing evidence it would appear that the principal source of spelling difficulty rests with a few particular letters, singly or in combination, rather than with any general features of words, such as length, number of vowels, ease of pronunciation, and number of syllables.

Regarding methods of overcoming spelling errors, the writer suggests the grouping of words according to common visual elements and *common errors*.

CHILDREN'S INTERPRETATIONS OF CARTOONS*

A STUDY OF THE NATURE AND DEVELOPMENT OF THE ABILITY TO INTERPRET SYMBOLIC DRAWINGS

A GROUP of social, political, and economic cartoons such as appear on the editorial pages of newspapers were interpreted by nearly three thousand public school pupils in grades four to twelve. The question asked was, "What does this cartoon mean?" The children wrote their answers, and these interpretations form the basis of a new attack on the nature and development of symbolic thinking and also provide data on the utility of cartoons as curriculum material.

The investigation disclosed that the children's responses were not of infinite variety, but that a very large proportion of the interpretations of each cartoon could be classified under a limited number of cores of meaning. All the responses were so classified, and were scored for purposes of quantitative analysis on a series of product scales constructed by the method of equally-often-noticed differences.

Three principal types of response were discovered: description, concrete interpretation, and abstract interpretation. Description of the cartoon, without interpretation, is characteristic of a considerable proportion of the responses in grades four and five. Above this level interpretative responses which recognize the symbolic nature of the picture predominate. The clearest distinction is between concrete interpretation, which is in terms of the objects seen in the drawing, such as the school building and the crowd, and abstract interpretation, which is in terms of the general concepts symbolized by these, such as education and immigration.

The hypothesis is supported that the ability to give abstract rather than concrete interpretation is associated more

* By Laurance F. Shaffer, Ph.D. Teachers College, Columbia University, Contributions to Education, No. 429.

with mental maturation than with other factors. There is a marked lack of relationship between the percentage of correct interpretations at various levels which varies with the difficulty of the cartoon, and the percentage of abstract interpretations which remains relatively constant from cartoon to cartoon. It is notable that the level at which the average response is abstract (age 12.83) corresponds closely with the standardization of the "interpretation of pictures" and "definition of abstract words" tests of the Binet scales.

Making an interpretation which is in harmony with the facts presented is an achievement beyond that of merely making an interpretation which is abstract in form. A study of the nature of the task of correctly interpreting a symbolic drawing reveals that it is a process of reasoning, similar in nature and in types of errors to the tasks of reading a paragraph, solving an arithmetical problem, or performing other acts of thinking.

The increase in merit of interpretations as measured quantitatively was found to be continuous throughout the range from grade four through grade twelve, though not entirely uniform. There is some indication of an increased rate of improvement from about age twelve to age fifteen.

The relationship of the ability to interpret symbolic drawings to age, grade, and intelligence was investigated by simple, partial, and multiple coefficients of correlation. The ability is definitely (.69) and about equally associated with grade and with mental age. With these variables constant, the correlation with age is negligible.

That cartoons are desirable curriculum material for social studies in the junior high school is suggested by several implications. The research shows that the cartoons, even with no contextual material, no discussion, and no training, can be interpreted abstractly by the average pupil at this level. Recommendations were made concerning the use of cartoons in context and the detection and elimination of causes of children's errors of interpretation.

THE EFFECTIVENESS OF MODERN SPELLING INSTRUCTION*

IN PROPORTION to its importance in the curriculum, spelling has probably received more attention from research workers in education than any other subject. Experts in applied education have worked out systematic classroom procedures in the light of the findings. This study attempts to take stock of spelling instruction in a public school situation where a professionally minded school principal has attempted to apply methods based on widely accepted research findings.

It asks the question: How effective is *formal* spelling instruction? The subjects of the principal investigation were about 1,500 public school children in Brooklyn, New York. The grade range was from the first through the eighth. The spelling achievement of each pupil on all the words taught during a semester was measured before the teaching of the

* By Robert S. Thompson, Ph.D. Teachers College, Columbia University, Contributions to Education, No. 436.

words and six months after the conclusion of the instruction. The pupils were also measured by a selection of words from the Iowa Spelling Scales and were found to be, at the beginning of the study, above the norms for the country at large. Some supplementary data bearing upon the relative efficiency of the test-study and the study-test methods were collected. The method of teaching in the principal part of the investigation was the test-study. Since many of the groups were sectioned on the basis of ability, a comparison of achievements of different ability groups was made.

THE GAIN IN SPELLING ABILITY ACCRUING FROM FORMAL TEACHING

1. If the gain in spelling as measured by a standard spelling scale is taken as standard, then the permanent improvement resulting from the specific teaching of a word is (with respect to that word), on the average, equivalent to one-half year's progress in advance of what could be expected if the word had not been taught.

2. If permanent mastery of the word is taken as the criterion, then specific spelling instruction is (with respect to the words taught) only 50 per cent efficient. This improvement for each word may be expressed as a "learning ratio," which is defined as the ratio of actual gain in percentage of correct spellings to the possible gain (difference between 100 per cent correct and the percentage correct before study). These ratios, on the average, approximate .50 for all grades except the seventh and eighth where they fall to about .35, indicating a substantial falling off in efficiency in the upper grades. Furthermore, the ratios hold constant for words so difficult that they are correctly spelled by only 50 per cent before study, or for words so easy that they are correctly spelled by 90 per cent before study. Difficult words make the same relative gains as easy words and, of course, greater absolute gains.

3. The above learning ratios are averages. The dispersion is large. The quartile deviation of the learning ratios, for all grades, is for words correctly spelled initially by less than 50 per cent, .11, and rises fairly regularly to .22 for words spelled initially by more than 80 per cent.

4. If "learning difficulty" is defined as the degree to which a word fails to gain in percentage of correct spellings as a result of specific instruction, it does not appear possible to select from a group of words of equal pre-study or initial difficulty, a smaller group of words which will constantly present a low or high degree of "learning difficulty" for typical classes. Words of the same initial difficulty show highly varying degrees of response to teaching, but this is more probably due to complexity of factors rather than to any "intrinsic" learning difficulty.

5. The "learning ratios" for the fast or bright groups approximate .70 for the more difficult words, and about .45 for the easier words; the ratios for the slow classes are about .48 for the harder words, and about .00 for the easier words (there being many words which are actually spelled less correctly after instruction than before).

6. Certain supplementary data seem to indicate that there is no significant difference between the efficiency of the test-study method and that of the study-test method.

IMPLICATIONS

1. The low average efficiency and the wide variability of improvement

among words indicate that the school is actually practicing many pupils in habits of inaccurate spelling.

2. Present-day spelling lists contain too many easy words.

3. The results cast doubt on the practicability of attempting to teach each word in the spelling lists separately and specifically.

4. There is some evidence to support the view that spelling might well be left to incidental learning, this incidental learning to be supplemented in indicated cases by remedial treatment.

A TECHNIQUE FOR DEVELOPING CONTENT FOR A PROFESSIONAL COURSE IN SCIENCE FOR TEACHERS IN ELEMENTARY SCHOOLS*

THE purpose of this study was twofold: the development of techniques for the selection and organization of content for a professional course in science for teachers in elementary schools; and the application of these techniques in outlining content relating to the principle of science selected for the study through the organization of core and marginal materials.

PROCEDURE

The techniques developed in this study as a means of selecting and organizing content for such a professional course may be summarized as follows:

1. The organization of teaching materials around large principles of science which serve as guides in the selection of content.
2. The derivation of elements of content by means of analysis of literature written by experts for the specialist and for the lay reader, together with analysis of outlines of science in use in elementary schools.
3. The selection, by means of criteria, of core materials which consist of those elements which relate directly to the principles of science and without which their suitable realization could not be attained.
4. The selection, by means of criteria, of marginal materials which consist of those elements contributing to an enriched background of experience enabling the teacher in training to secure enlarged interpretations of core material and which, at the same time, give him the security in his subsequent teaching which comes only through adequate preparation.
5. The evaluation of elements selected as core and marginal materials on the basis of experience and judgment of instructors who have had broad training in science and who are primarily interested in training teachers to teach in elementary schools.
6. The organization of elements into teaching units in such a way that, as the teaching progresses, the simple elements will form more and more complex associations that will develop gradually an understanding of the principles in the minds of the learners.

* By Florence G. Billig, Ph.D. Teachers College, Columbia University, Contributions to Education, No. 397.

These techniques were applied in selecting and organizing teaching materials relating to this principle[1] of science:

Living things survive because they are fitted to conditions under which they live and in which their structures and ways of living enable them to attain adult life and to leave offspring.

The content thus derived was organized into a teaching unit and taught to a class of students enrolled in a course in science designed for teachers in elementary schools.

The details of content used in developing and teaching a professional course in science depend, in large measure, upon the background of science possessed by the students. To secure knowledge regarding the background in natural science, a survey was made of the preparation of 954 students enrolled in courses in science for teachers in elementary schools, in 14 teacher-training institutions.

CONCLUSIONS

1. The scientific preparation of 98 per cent of the students has been secured predominantly in high school. Of these students 55 per cent have received all their preparation in high school and 43 per cent have secured some training in high school and some in college.

2. There is no indication of a sequence of subjects in high school directed toward a preparation for the work which the students expect to do.

3. The number of science courses studied by the students before entering courses for teachers varies from one to nine. Two, three, or four courses have been studied by 74 per cent of the students.

4. Teachers colleges and normal schools are not requiring additional preparation in college for students entering courses in science for teachers. They are depending, in large measure, upon the high school preparation in science as a basis for the college course.

5. There is no definite body of knowledge, in any subject, which is possessed by all or even a large percentage of the students and upon which a professional course can be built.

A TECHNIQUE FOR STUDYING THE SOCIAL-MATERIAL ACTIVITIES OF YOUNG CHILDREN*

IN THIS study an attempt has been made to evaluate a technique for recording observations of the spontaneous reactions of children two to three years of age to material objects and to people. This evaluation has been limited for the most part to a study of the reliability of the measures used. Their possibility for differentiating among individuals has been considered but briefly while the relationship to other forms of behavior has scarcely been touched. Although nothing has been proved with respect to constancy of behavior from day to day except where the influence of temperature, humidity, and location is concerned, it is *assumed* during the discussion of differentiation and relationship. However, this assumption may be unjustified.

[1] The term "principle" is used in this study to designate a general truth in science toward which the work in science may be directed.

* By Margaret Barker, Ph.D. Teachers College, Columbia University, Child Development Monographs, No. 3.

PROCEDURE

The technique required an observer to chart on a floor plan drawn to scale the movements of a child for a five-minute interval during the period of free play. Simultaneous records of two observers working independently were obtained and three methods used for testing their reliability. The agreement of observers was measured first by the Pearson correlation coefficient. The significance of the difference between means was found next, and third, where there were enough records on individual children, the rank order of the children according to the means of two observers was compared by the rank system of correlation.

FINDINGS

The agreement among observers in recording distance covered is high as measured by the Pearson correlation coefficient. In the case of social contacts the agreement is lower. In timing activities the agreement is apparently high. Two activities were sometimes considered as two by one observer, but as only one by another, in timing. The time for the two was added, therefore, in pairing scores to obtain the correlation coefficients. It is difficult, therefore, to draw any conclusions as to true reliability on time. The highest agreement is for activities of less than one minute. The agreement of observers as to number of activities is somewhat the same as for social contacts. Activities were classified as social, material, social-material, and self. Since observers were not very successful in timing activities according to this classification, a very rough measure of frequency of occurrence is all that could be used in considering their possibility for differentiating among individuals. According to the method used for determining this, the measures arrange themselves in the following order: distance covered; number of social activities; number of social contacts; number of material activities; number of activities; number of social-material activities, and number of self activities. Of these measures, social activity has most relationship to the others. Other factors influencing activity are temperature, humidity, change between the first and last of the year, and location. Temperature seems to be inversely related to number of activities. With distance covered there is no relationship unless the entire temperature range is used. The other relationships are very slight. Humidity bears no relationship to the measures. Significant change between the first and the last of the year seems to occur in number of social contacts and number of activities. Location seems to affect significantly distance covered, number of social contacts, and number of activities.

CONCLUSIONS

The chief criticism of the technique is that it attempts to record too much. Social and material activity should be studied simultaneously, but not by one person. One observer should record the child's responses to people and another his responses to material objects. Then the observations should be combined to obtain a picture of his activity as a whole. A study based on this method of procedure is now under way.

TEACHERS COLLEGE *in the* NEWS

COMPILED BY CLYDE R. MILLER
DIRECTOR, BUREAU OF EDUCATIONAL SERVICE

"Teachers College, as an institution, holds no position, advocates no theory of education. It selects its faculty and, as every such institution must, permits each member untrammeled to present whatever his reflections and his researches lead him to believe."

The Dean Emeritus Participates in Greeley Celebration

Dr. James E. Russell was a speaker recently at the celebration of the fortieth birthday of the State Teachers College at Greeley, Colorado. An account of his address appeared in the *Tribune* of Greeley:

Dr. Russell's address on "Education in Colorado Thirty-Five Years Ago," dealt with many interesting experiences of his life in this state from 1895 on. He was for several years professor of philosophy, psychology and pedagogy at the University of Colorado, and many stories of the competition to draw students to the young state institutions, and of other difficulties of those early days, were included in his address. He said in part:

"I knew more of Boulder than of Greeley, but in those days the two institutions were not greatly differentiated. I fancy the financial support of the normal school was not appreciably less than that of the university. And in saying that, I am indirectly testifying to the superior diplomatic ability of Dr. Snyder. I can imagine that a legislature would find it difficult to withstand his importunities for funds. To him a normal school was the most important asset that a state could have and I pity the man who should intimate in his presence that the school in Greeley stood second to any other anywhere. He knew that his school was a good one because he had made it so.

"His sublime faith in education as the panacea for all ills of the body politic, and his calm assurance that Greeley could supply the needed antidotes made his will irresistible. His faculty could not help catching his enthusiasm and his students did go out as disciples of his cult. What Greeley is today, one of the foremost teacher-training institutions of the world and an acknowledged leader in our profession, is due in far greater extent than this generation knows, to the self assurance built into its foundations by Dr. Snyder.

"Here is an example of a faith that did remove mountains. One may bear with some of his foibles and give less credence than he did to the efficacy of some of the means he employed, but Dr. Snyder's spirit still pervades this college as I hope his shade still roams about this campus and lovingly watches the growth of every tree and blade of grass. To one whose first impressions of this place were of a truncated building set in a thicket of trees the size of one's wrist, the vista today is passing belief. I am sure that Dr. Snyder, were he here, would much prefer to see what we see than to hear what we say.

"It must be apparent from this short survey of schooling in Colorado thirty-five years ago that I found it highly individualistic. Not only was education a personal matter which one got in some high school or in Boulder or Greeley or Fort Collins or Colorado Springs, but school systems were individualized. Gove and Smiley and VanSickle were Denver, just as Baker was Boulder, and Snyder was Greeley.

"Under our American system of educational development, it is inevitable that advance should come from individual

initiative. Colorado in its infancy exhibited the same tendency as all the older states in giving scope and freedom to strong men when they appeared. In trade and industry, in business and in the professions, in the schools and in the colleges, strong men found a way. Under such influences it was inevitable that those who were fitting themselves for a pioneer life should think in individualistic terms.

"Our American education has stressed individual advancement almost to the exclusion of consideration of the general welfare. Giants were needed when life was hard and tasks were tackled single-handed. Life today may be no less exacting but individual prowess is less obvious when everyone has a thousand slaves at his command by way of power in steam and electricity. Generalship consists no longer in leading the charge in the front line but in using strategy in securing the coöperation of masses when and where and how it may be needed.

"Public education of the future must take new factors into account. Nothing will be gained to benefit the individual if the foundations on which individuals stand shall collapse. We believe that the American ideal of individual preferment is priceless: we want no government that levels down or denies to any boy or girl the best development of all native talents. It is obvious, however, that for the first time in our history we are menaced by two great demonstrations of despotic power in nations closely associated with us in international intercourse. We cannot remain unaffected by what happens to millions of our fellow beings who have participated with us in what we proudly call our western civilization. In Russia and in Italy today the fundamental principle of American democracy is not only denied but is banished by fiat and the point of the bayonet.

"Veterans like myself who have seen the marvellous changes of two generations past are very doubtful of the outcome of two generations to come. We realize the futility of all this wonderful development in this most marvellous age if and when America shall sell its birthright for a mess of pottage. We have never doubted the worth and wisdom of American ideals; it has been a part of our being as unconsciously enjoyed as the air we breathe. It comes to us, therefore, as a shock to know that the trend of civilization, which we have smugly assumed was coming in our direction, is being sharply turned away over a great part of the world nearest to us."

Does Practice Make Perfect? Not at All, Declares Dean Russell

Dean William F. Russell recently addressed the Colorado State Teachers Association and spoke to the student body of the University of Denver. He was interviewed by Gene Lindberg, staff writer of the *Denver Post:*

Horse-and-buggy school teaching has no business in this sixteen-cylinder age, says Dean William F. Russell of Teachers College, Columbia University.

"Why," asks Dean Russell, "shouldn't we put education in a test tube, along with medicine, electricity, aeronautics and other sciences? If we hope to improve it, we have to study it, spot faulty methods and invent better ones. That's what every scientist must do."

Modern laundries now operate research laboratories to improve the business of washing dirty clothes. Schools, Dean Russell thinks, should do as much for the business of training human minds.

"I want to say," he declared, "that the Denver schools stand way up among the finest in the entire country. Denver has not only fine school buildings, but also a curriculum second to none."

At Columbia, he says, students and faculty are constantly engaged in scientific research to improve school methods, schoolbooks and school teachers.

"Remember the old spelling books?" Dean Russell asks. "Crammed full of difficult words nobody ever uses. The old-time authors possibly thought the words were used but they didn't know it. They put them in chiefly because they were hard to spell.

"We know about words, now. Long

and constant study of dispatches in daily newspapers, business letters and written pages of all kinds has told us by actual count which words people use most in writing. And you only need spelling when you write.

"We know, to the dot, which words are used. The words oftenest used are the ones that go into modern spelling books. Spelling has ceased to be an exhibition trick for smart pupils. It has become a useful art for everybody."

Reading used to be taught aloud. "How many times does the average person read aloud?" Dean Russell inquires. School children now are taught to read silently, swiftly and accurately for their own information. That's the kind of reading they need to know.

"The old adage that practice makes perfect is an exploded theory," said the Columbia educator. "Golf links are cluttered with duffers who have been practicing the wrong swing with the wrong club for years. They are just as far from perfection, or farther, than a novice.

"Practice makes habit? If you practice the wrong habit, you have something to unlearn before you can learn the right one.

"We have put the arithmetic subject called addition under the microscope, and found out how the human mind works when it adds figures. We find it requires more than twenty different skills, just as golf requires a variety of separate movements.

"Modern teachers can tell in what skill a child is weak, and set him right. Unaided, he would remain a duffer at mathematics all his life."

Similar things are being done for higher education. The college has as much room for improvement as the first grade.

In his talk to University of Denver students, Dean Russell predicted a day when workers will labor only three days a week, and only six hours a day, at that. They will not start work till they are 20 years old, and will retire at 45. Standards of living will be far higher than anything we have attained to date, he predicted.

The New Wizard

Gentlemen and ladies who seek tabulations on doctors' theses, astronomers who demand figuring in the higher realms of mathematics, school systems that require expert statistical aid, business firms that need accountants whose power far transcends that of those who draw pay checks every Saturday noon—the tabulating and statistical and correlating needs of these and others are now being met by a machine quite as marvelous as the radio. It has been devised by Richard Warren, of the Columbia University Statistical Bureau, and Robert M. Mendenhall, of the Columbia University Statistical Bureau and assistant in statistics in Teachers College. This mechanical wizard—as one familiar with the species might suspect—is a close relation to the Hollerith machine. In this connection it is interesting to note that Dr. Hollerith, who built his first machine in 1881, was himself graduated from Columbia in 1879 and received a Columbia honorary degree in 1900. As the Hollerith machine has made possible the first scientific United States census, the Warren-Mendenhall machine is making possible amazing results in scientific research along many lines. Already it is being used by Yale University to produce astronomical tabulations; by Harvard University for educational statistics; by the University of Minnesota for detailed financial accounting; by New York University for registration statistics. The story of this remarkable machine, the services of which are now being made available at cost, is told in an editorial in the *New York Telegram:*

A remarkable new computing machine is on view at Columbia University in the educational research bureau.

The long, lathe-like engine, fed by thousands of electric feelers, could rout single-handed an army made up of all the rapid calculating geniuses ever born on earth. Though new it has already taken on in the service an air of ancient, venerable wisdom and the workers in the bureau go to it with their intricately punched cards like disciples to a wise man.

This machine can make in three minutes a table of logarithms. In three minutes more it can figure out an astronomical table. And in ten minutes more it will— But let us turn to its more practical abilities.

Let us assume that a school has sent in data showing the ability of the students in English, mathematics, Latin, history. A group of morontype machines first sort cards bearing these data; machines of normal intelligence cull the more ordinary data, and then the wizard himself takes charge. The master machine gulps down these cards and yields in the case of every student correlative information showing how ability in mathematics may be dependent on ability in English, and vice versa, and so on with respect to all the other subjects.

What is more, the machine will compare the intelligence data of the cards with the marks which the teacher gave the particular student, appraising not only the characteristics of the student but checking the professor also.

And, though an educator born, the machine is equally versatile in computing inventories and figuring interest on bank customers' accounts in the mass, doing the work of dozens of scribbling clerks and never making a mistake.

It was born of the genius of two graduate students at Columbia, Richard Warren and Robert M. Mendenhall, the first twenty-nine, the other twenty-four, neither of them pedantic, both being, in fact, worldly types of young men without any frills at all.

These two young fellows were sitting at lunch one day with their superior officer, Dr. Ben D. Wood, head of the educational research bureau, who remarked that he wished "you boys would work out a machine to do correlating." The two turned over a menu card and began to sketch out some formulae.

In the year 1823 another individual set out to do the same thing. He was Henry P. Babbage, an Englishman. His idea—the one now achieved—was to multiply and get the powers of numbers by adding them. The British Parliament made appropriations from time to time for the financing of his experiments with his "calculating engine," but along about 1842 Sir Robert Peel decided the business was too costly. A monumental book now tells of Babbage's experiment, and his "engine" stands in the British Museum.

The work which Babbage was not able to conclude in nineteen years two boys, aided by modern mathematical knowledge and their own genius, did in ten minutes on the back of a menu card. The formulae were transmitted to a manufacturer of computing machines, and a new automaton came into the world.

How much will Mendenhall make out of it? Nothing—the machine will not sell like Fords.

Professor David Snedden, Like H. L. Mencken, Has His Prejudices

The *New York Times* account which follows mentions the "strong convictions" of Professor Snedden. The professor himself has no objection to calling them "prejudices." The *Times* article:

That vocational training in American public education, and notably in the local high schools, is inefficient because the courses fail to cover the required field, and that modern so-called liberal colleges are "floundering in morasses of vague objectives" were among the conclusions listed in a statement by Dr. David Snedden, professor of education at Teachers College, Columbia University. Dr. Snedden announced twenty of his convictions that "run considerably counter to widely held opinions of educators or laymen or both."

Regarding the vocational instruction offered by local high schools, Dr. Snedden

said that its value was limited to the courses in typewriting and stenography. "The garment industry is the greatest single trade in the city," he said, "and yet outside of the Textile High School, which emphasizes the selling end of the matter, no school in the city gives courses in operative work. I do not say that the Textile High School should give other courses. But I do say that such other courses should be given."

In general, Dr. Snedden said, his list of prejudices applies just as much to the large, costly metropolitan schools as to the smaller ones located anywhere else. Among the list of "strong convictions" were:

That schools for children under six years old are needless, perhaps injurious.

That the time is not far distant when all children will attend full-time schools until 18 years old; when a large proportion of prospective mothers will have received some home economics training, when the earning powers of fathers will be better and families, except of the very prosperous, will rarely exceed three or four children. Under these conditions it will seldom be necessary or desirable that children less than 9 should enter full-time schools.

That, in general, collegiate control of high school objectives through subject matter admission requirements has been of more dis-service than service to high schools, and has served ends for the colleges which could better have been met by other means.

That the algebra taught in American high schools is a non-functional and therefore nearly valueless subject for 90 per cent of all boys and 99 per cent of all girls —and that no changes in method or in content will change the situation.

That the modern language instruction in American high schools is a shameful travesty upon good education, and is in effect a gigantic quackery practiced, through no malice, upon parents and supporters of secondary education.

That the history studies as now organized for grades five to twelve make very slight contributions to civic virtues, and contribute not a great deal to personal culture—and that the fault is not in methods of teaching but in clear definition of objectives.

That home economics courses in junior and senior high schools are now too vocationalized.

That really good training for homemaking can rarely be given to students less than 19 to 25 years old, and should then be given in special, centrally located, schools.

That oral reading as a required subject should be discontinued after the third grade.

That in spite of all reductions, we still teach two or three times as much arithmetic as will ever prove functional in the first six grades.

That the richest cultural subject in junior and senior high schools should be recent or current literature, at least one-third of which should be looked for in journals.

That very little of what should properly be called civic education can be effected in the first six grades.

That substantial proportions of health or physical educations now given in the first six grades are usefully functional; but that beyond that, all forms of "physical welfare" educations are now lost in a forest of vague or ambiguous objections, aspirational mysticisms, and the crass controls of semi-commercialized sports.

"Present-day liberal colleges," Professor Snedden asserted, "often follow the will-o'-the-wisp vocational aims, and thereby fail to realize the valid objectives of honest liberal education."

Five of the prejudices dealt with the matter of vocational training in the high schools. "The present American high school," said one, "in spite of its vogue and wealth, is a practically useless agency of vocational education." After noting the stenographic exception, it continued by minimizing the beneficial effects of such education except upon its best one-fifth of students. Further, high school attempts to develop vocational proficiencies were called "hopeless," because of the need of the "particularized vocational school, each one closely linked up with commercially productive work in its line." Dr. Snedden anticipated from one to ten such schools per State for each

vocation, "when America finally wakes up." Manual and industrial arts training at the junior high schools was said to be not worth 1 per cent of its cost, while no exorbitant expense would be necessary to bring into existence the new type of vocational schools.

Superintendent O'Shea, of New York Public Schools, Takes Issue With Professor Snedden

As reported by the *New York Herald Tribune*:

Public schools were defended by William J. O'Shea, Superintendent of Schools, from indictments made against them by David Snedden, professor of education at Teachers College, Columbia University, that they fail to give training of the sort that a majority of the students will need in later life.

The Snedden view that there is no social value justifying teaching music to more than 10 to 15 per cent of the most talented was termed "a debatable question" by Dr. O'Shea. "How are you going to find your 10 to 15 per cent unless you have some basic simple musical education?" he demanded. "Training given offers a chance for latent ability to develop. Mr. Snedden's charge that 'we teach two or three times as much arithmetic in the first grades as will ever prove of use' is not true now. Years ago an hour a day used to be spent on arithmetic. There is no square root, cube root, nor partial payments so taught any more. Less time is spent but teaching is more practical."

H. H. Sheldon, professor of physics at New York University, supported Professor Snedden's view on vocational training. "We see many boys going to engineering school who never will be engineers. Many of them will be draughtsmen and many more will spend their lives running a surveyor's transit. Why should we spend four years making a man a draughtsman if we could teach him in two? Our education has tried to pull every one to the top of the ladder. There are people with A, B, C, D, E, F and G talents. Surely it is better to develop a G grade talent to an efficient E or F worker than to have training which seeks to make the youngster a doctor or a member of another of the popularly rated A professions."

You Can Reduce on the Hollywood Diet But Can You Work on It?

In an interview with Ruth Howe, special writer for the *New York World*, Professor H. G. Rowell attacked diet fads and faddists:

Urged on by certain food companies, by diet faddists seeking notoriety, and by invalids yearning for companionship in martyrdom, the American nation is creating a new religion out of its preoccupation with the gastro-intestinal tract. So says Dr. Hugh Grant Rowell, assistant professor of health education at Teachers College, Columbia, in supporting the plea made by a prominent British physician, Dr. Robert Hutchison, at the British Medical Association's conference at Winnipeg, for less anxiety over the daily menu.

"The British doctor treated us to a little good horse sense and we may as well admit it," Dr. Rowell says. "From the high school girl who goes without her dinner, to the matron who subsists chiefly on lettuce, food fads have become a permanent national hobby, backgammon and midget golf notwithstanding."

The fundamental reasons why the public has become such a prey to food fads and fancies, in Dr. Rowell's opinion, are first, the fascination of self-medication, of being one's own doctor; second, the belief that extraordinary cures in certain diseases have been effected by diet régimes which physicians, by "refusing to coöperate with the press, have not let the public in on"; third, the need to find a diet for an armchair age.

"Unconsciously, we are accommodat-

ing our foods habits to a sedentary age. The change has made us overconscious of the food we eat, creating a health bogey out of one article, seeing in another a cure-all for everything from over-weight to senility, not to mention almost any kind of disease.

"So all the women from sixteen to sixty start out on a régime of grapefruit and semi-starvation, some because they want to reduce, others because they like to be the center of interest on one count or another. Of course, such a diet would come out of Hollywood. You never by any chance heard of a universal diet being broadcast from the Mayo clinic or Johns Hopkins.

"Probably you can reduce on the Hollywood diet. But the point is, can you work on it? You can also reduce if you starve yourself for a few days, but you have to go to bed to do it. In short, you have to have time and money to go in for most of these crazes. And when it throws the worker out of commission, freak dieting is really vicious."

For some reason or other, Dr. Rowell said, holiness in eating appears to be achieved generally through nuts, vegetables or oatmeal. Meat eating, closely followed by white bread, has come to represent a sort of pagan sinfulness.

In support of their new religion, diet faddists point to the longevity and health of monkeys or some other nut-eating creature, to the hardiness of the Scots, and so on, he said. This has to be regarded as conclusive evidence until somebody sets out to prove the opposite. For instance, Stefansson proves that he can live on an unvarying diet of meat and do well on it; some medical authority exalts the white loaf; another denounces oatmeal, and the public, now thoroughly attached to its individual hobbies of dieting and self-prescription, is left quite bewildered and the prey to the next fad, or high pressure advertising campaign, that comes along.

Dr. Rowell emphasized the fact that real obesity is not a healthy condition and that proper dieting, as prescribed by a competent physician, is necessary. He pointed out that insurance companies do not regard the over-weight person as a good risk. He also instanced the amazing cures which have been accomplished by diet, in cases of diabetes and pernicious anaemia.

Fads apart, he believes that school and clinic work among school children as to proper feeding have had a great influence in bringing the American family back to the use of "good, wholesome, plain foods undisguised by sauces and flavorings."

Weight, he added, is a purely individual matter, in which not only individual measurements but constitutional peculiarities and family history have to be considered. Arbitrary height-weight tables have proved to be inaccurate. He regretted the passing of the old family physician for this reason, because such a doctor did not have to be guided by tables, but was able to consider the whole history and physical characteristics of his patients.

The disappearance of the comparatively inexpensive family physician and the rise of the costly specialist, Dr. Rowell believes, has encouraged self-medication and the tendency to resort to freak books and formulae for obtaining health.

He feels, however, that the pendulum is already swinging back to sanity and prophesies that very soon brown bread, spinach and oatmeal will be relegated to their proper positions in the dietary of food-conscious Americans.

Clothes Look Better and Wear Better if This Laundry Advice Is Followed

Home economics teachers in high schools and junior high schools will find large value in findings recently compiled by Dr. Ellen McGowan. This Teachers College publication is the basis of an article by Anabel Parker McCann, in the *New York Sun*:

Some of the "good, old-fashioned," well-established methods heretofore used in doing the family washing are brought into modern disrepute and relegated to the limbo of has-beens by a new book

which gives the results of long laboratory experiments conducted at that fount of housekeeping knowledge, Teachers College.

Among these are the use of the boiler and the process of boiling cotton and linen fabrics (except when there is need of sterilization) and the use of a small amount of soap in the final rinsing water when washing woolens.

This new and authoritative analysis of washing methods and cleansing agents, "A Comparative Study of Detergents," was written by Ellen McGowan, Ph.D., of the School of Practical Arts, and published by the Bureau of Publications, Teachers College, Columbia University. Dr. McGowan advises the use of low temperature for washing water for all textiles, and of mild soaps. After going into careful explanation of the nature of different fabrics, the character of their fibers and the effect of heat on the different types, she concludes in this fashion:

"Most errors in temperature lie on the side of too high heat. Stains may be set, wool may shrink, silks and synthetics may weaken, colors may fade, bleaching may spell destruction, and even cleanliness itself may be defeated (if the temperature is too high) through killing the suds and decomposing the soap."

A safe temperature for soaking clothes before washing, she states, is that of the room and never above 90 degrees Fahrenheit. She even advises the use of a thermometer for regulating water temperature. The safe temperature for washing wool, silk and synthetic fibers is close to body heat, or about 100 degrees Fahrenheit. "For soiled garments," she advises, "to offset such a moderate temperature, use two soapy waters, which is a good rule in all washing." Her unvarying rule for rinsing waters is: "Keep the rinse waters at the same temperature as the wash waters."

For colored fabrics, she says, "the safe temperature is from 90 to 100 degrees." And she adds: "Where the dye will stand the hotter water which may be necessary for very soiled garments, keep below 120 degrees Fahrenheit as a rule."

It may surprise some housewives to be told that "if grease spots are not promptly and thoroughly removed they may oxidize to substances which are as difficult to remove with ordinary cleansers as a coat of varnish," this being due to chemical action. Passing from dirt to stains, Dr. McGowan points out that "cold water put upon a stain at the time it occurs will make its complete removal later an easier operation. Hot water should not be put on such stains as blood, egg or milk, since the protein they contain is thereby coagulated in the fiber of the fabric.

"Sugar, starches, milk, vegetable stains, blood, fresh mildew, bluing, ice cream, albumin, perspiration, fresh tea or coffee stains, scorch on cotton or linen, and fresh grass stains are more or less completely removed by cool water. Boiling water is effective on fruit stains and also on tea or coffee stains if not mixed with milk or cream. As a rule, the plain water treatment for the above stains should precede a soap treatment." Dr. McGowan advocates the following procedure in the removal of any stain:

1. Place the garment on a clean table.
2. Isolate the spot as completely as possible.
3. Cover remainder of garment with a protecting cloth.
4. Place folded cloth or white blotting paper under the spot, and change frequently during the removal treatment. The stained area may be placed over a bowl. Use the cloth for unwashable goods and the bowl for washable.
5. Make short applications of the stain remover, followed by neutralizations if an alkali or acid is being used. They are less harmful to the fabric than a long-continued treatment.
6. Beware of inflammable grease solvents. Friction alone may ignite them.
7. Neutralize acid stains with mild alkalies such as diluted ammonia, soap or borax solutions. Neutralize spots of alkali with a mild acid such as vinegar.
8. Do not leave traces of the stain remover in the fabric after the stain is removed. This is a necessary caution in the use of acids and alkalies.
9. If rings form, steam or brush to remove.

Referring to the washing of silk, Dr. McGowan says: "Rubbing and twisting are harmful, because silk is slightly weaker wet than dry. The mildest of soaps are especially necessary. Rayon fabrics (of which four types are named) have in common the property of losing strength when wet. Therefore, while mild soap and moderate temperature are desirable, the main thought in washing rayons should be gentle handling without any friction while wet, and drying without strain, either of clothespin pressure or the weight of the suspended fabrics on the clothesline."

Dr. McGowan believes that knowledge of cleansing processes and agents should be taught in high schools and junior high schools.

Fear of Loss of Job Has Made Many a Teacher Silent

This point is dwelt upon in an *Indianapolis News* editorial based upon an address delivered by Professor George D. Strayer:

Dr. George D. Strayer, director, division of field studies, Teachers College, Columbia University, told the Indiana School Men's Club what it has heard a good many times, when he declared that the township is not the stable unit for educational administration. Throughout the country, he said, public education is lacking because "the machinery for its administration is not equal to the job." In this state Dr. Strayer found 2,300 one-teacher schools. He declared that no matter if a genius presided over every one of them, "he could not develop a program of education suited to the needs of the boys and girls who attend them." He congratulated Indiana on its consolidation efforts, and said: "The program will not have been completely carried out until a new policy is adopted that will ignore township lines. What are township lines, anyway? They are the boundaries of the bailiwick from which the township trustee gets most of his gravy. The task of changing these conditions is yours. You may say that the politicians will not listen to you. The politician is ever ready to listen to the trend of public opinion. It is your task to create public opinion."

For years the Indiana teachers, in their annual meetings here, have adopted resolutions declaring against the township as a unit for rural school administration and favoring the county plan. Bills have been introduced in the legislature. At home the teachers were faced with a situation that affected their bread and butter. If they protested against the township trustee domination they were discharged and other teachers, more discreet, employed. Resolutions adopted here do not have much force if the teachers are silenced by the fear that they will lose their jobs. The trustees are extremely active whenever the legislature convenes. The problem is one that will not be solved until the public awakens to rural school needs.

It All Comes Back to the Teacher-Training Institutions

The conductor of this department spoke at the annual meeting of New York State teacher-training faculties held at Syracuse. Here is a *New York Sun* dispatch based on the address:

If the efficiency of the teacher-training institutions of New York State were improved the problems of teacher supply, salary and tenure which the profession is facing would tend to solve themselves, according to Clyde R. Miller, director of the Bureau of Educational Service, Teachers College, who spoke at the New York State Association of Teachers College and Normal School Faculties meeting in Syracuse.

Mr. Miller made this observation after declaring that guaranteed salary schedules and assured tenure—both of which he approved in themselves—often have the effect of retaining poor teachers in their jobs to the detriment of the

pupils. The remedy, he declared, lies in keeping the misfits from entering the profession, not in destroying tenure and salary protection for all. Thus, he pointed out, it all comes back to the teacher-training institutions, which should so select their students as to exclude the unfit.

In this connection he asserted that while there is an abundance of teachers there is a dearth of good teachers.

"The program of teacher-training institutions would seem clear," he said. "Make these as good as the best liberal arts colleges. Let their duty be twofold: First, select as students young men and women of the kind the best liberal arts colleges delight in selecting and give them a combination of a cultural education and professional preparation such as liberal arts colleges cannot give. Second, continue the education of those teachers already in service to increase their understanding and deepen their sympathies."

Young men and women who can meet the requirements set up for good teaching will have little trouble in obtaining and holding well-paying positions, Mr. Miller said. But guaranteed salary schedules and assured tenure, both of which are "highly desirable in themselves," according to Mr. Miller, tend in instances to deprive the public schools of the services of the better teachers, he said.

This, he pointed out, is due to the fact that in the large school system schedules are administratively essential, with the result that excellent teachers must of necessity receive the same salary as mediocre teachers. Hence, some of the better teachers seek positions in private institutions rather than in the public schools. In the former they are paid according to their merit, Mr. Miller said. He continued:

"Let me be not misunderstood. A salary schedule is an administrative necessity in a school system of any size at all. I merely suggest it would be fine if some way could be found to retain the schedule and at the same time keep in the public schools at more nearly adequate salaries our better teachers and administrators. I confess I don't know the way.

"As for tenure, everybody in any civilized country ought to have tenure in the sense that he should have always the right to work if he is willing to work. This does not mean that because a man chooses to work as a physician he should be permitted to become and remain a physician always. Nor does it mean that because one has managed, irrespective of grave defects in personal fitness, to enter the teaching profession he should be permitted to remain in it all his days to the detriment of hundreds or thousands of pupils.

"When tenure retains in positions of responsibility persons who are not competent, their good fortune becomes the ill fortune of society and of countless individuals. Reward good teachers well. Give them economic security in sickness and in old age. Anybody who is worthy to be a teacher deserves this.

"And those who are not worthy? Well, that is not their fault, in most cases. They, too, deserve opportunity to earn a living and to have security in sickness and old age. But they should not be teachers. I believe in tenure of economic security for teachers and for all other workers.

"In conclusion, you will agree with me, I believe, that for the solution of these problems of teacher supply, salaries and tenure our citizens must look to the teacher-training institutions. Especially is this true in New York State, whose professional schools for teachers rank with the best."

Dr. Thomas Alexander Sees Psychology as Useless Pseudo-Science

Dispatch from Syracuse to the *New York Herald Tribune*:

Until a new psychology is developed to replace the present "pseudo-science" the subject had better be dropped from teacher-training courses, Dr. Thomas Alexander, professor of education at Teachers College, Columbia University,

told the opening meeting here of a convention of the New York State Association of Teachers College and Normal School Faculties. More emphasis should be laid upon the objectives of life and far less upon the stereotyped processes of teaching, Dr. Alexander said, and he declared that inadequacy of training in the values of life was the greatest weakness in American teacher training today.

"In the last twenty years we have measured everything in the school system," said Dr. Alexander. "We have scales for this and that, but we have ignored the real objectives of human society. Teachers give more heed to measuring what they teach than to educating the children.

"I can think of only one item which has been discovered in the last twenty years that has been contributed by psychology. Every worthwhile suggestion contained in a book on psychology has been known to the human race since long before the study of psychology was organized.

Young teachers in training should be required to participate actively in some walks of life, and it would be extremely educative for them to pass a semester in a factory, on a farm, or in some industry, Dr. Alexander asserted. Their ability to appreciate and understand the problems of life would be immeasurably increased, he added.

Previous teacher training has been devoted to training classroom instructors rather than educational leaders, Dr. Alexander continued, pointing out that the elementary school teacher functioned primarily as an educator and an intellectual leader in the community in which he worked, and that, therefore, it was necessary that stress be placed upon the training of teachers who were creative, resourceful and original.

As a means to insure the attainment of this end Dr. Alexander suggested the requirement of a broad academic preparation for admission to a teachers college. Two years of college work, and in time even an academic degree, should be the basis for professional training for teachers, Dr. Alexander suggested. In combining general education and professional education as is now being done in teachers colleges and normal schools, neither one is being done very well, he declared. Above all, the young people who have been selected as teachers should be trained to think for themselves, Dr. Alexander concluded.

COLLEGE & ALUMNI NOTES

COLLEGE NOTES

BOARD OF TRUSTEES

At the meeting of the Board of Trustees of Teachers College held at the College Thursday, November 13, 1930, Junius L. Meriam, Ph.D., professor of Elementary Education at the University of California, Los Angeles, was appointed Visiting Professor of Education, with a seat in the Faculty of Education, for the Spring Session of 1930-31.

Leave of absence in the Spring Session has been granted to Director M. A. Bigelow of the School of Practical Arts, to enable him to accept the invitation of the American Social Hygiene Association, the National Health Council, and the British Social Hygiene Council to deliver addresses in England, France, and Germany during March and April, 1931, before certain organizations concerned with health education and social work.

The Trustees established the "Frank Ross Chambers Fellowship Fund" from a gift of $15,311.00 presented by the daughters and grandchildren of Mr. Chambers in commemoration of his eightieth birthday. Mr. Chambers has been a member of the Board since 1904, and was its vice-chairman from 1908 to 1928.

The "George Drayton Strayer Fellowship Fund" was established from a gift presented in May, 1930, by the colleagues and friends of Professor Strayer to commemorate his twenty-five years of service in Teachers College and to public education.

FELLOWSHIPS AND SCHOLARSHIPS IN TEACHERS COLLEGE*

Teachers College offers annually a limited number of Fellowships and Scholarships. Awards are made on the nomination of a committee, appointed by the Dean, and are approved by the Faculties of the College.

The following Fellowships and Scholarships have been available from 1924 to 1930.

Fellowship Fund	$3,000
Grace H. Dodge Fellowship	750
Eleanor Colford Morris Fellowship	750
Pond Scholarship	75
Charlotte Louisa Williams Scholarship	150
Earl Scholarship	150
Hoadley Scholarship	150
Tileston Scholarship	125
Runyan Scholarship	50
Margaret Hoe Scholarship	300
Augusta Larned Scholarship	500

The Chambers Fellowship, the Romiett Stevens Scholarship, and the Naomi

* This is a digest of a study of the Fellows and Scholars of Teachers College for the years 1924-1930, and was made by Mrs. Ershal Freeman Smith, assistant to the Secretary.

Norsworthy Fellowship, awarded in 1930-31 for the first time, and certain departmental awards, are not included in this study.

During the six-year period 691 persons applied for awards, 412 of whom were women. There were 88 awards, of which 48 were to women. The total amount held by men was $18,900 and the total amount held by women was $19,895.

By a study of the academic history, scholarship average, age, and experience of each person to whom an award was made it is possible to indicate rather clearly the characteristics of the typical Fellow and Scholar.

The Teachers College Fellow (man) has completed graduate work beyond a Master's degree; he has attended Teachers College with a scholarship average of B+ or better. His age ranges from 29 to 35 years, and he has had 5 to 11 years of experience. His major department and previous employers have endorsed his application. The facts for the woman Fellow are similar except that her age ranges from 34 to 37 years and her experience from 7 to 11 years.

The Teachers College Scholar (man) has been a candidate for the Bachelor's degree, Master's degree, or has been taking his second year of work toward the doctorate. He may or may not have attended Teachers College. If he has attended Teachers College his average age has been from 27 to 34 years and he has had from 4 to 9 years of experience. His application has been endorsed by his major department and employers. The woman Scholar has the same academic background; her age ranges from 27 to 38 years and her experience from 5 to 14 years.

Eighty-five per cent of the Fellows and Scholars filed applications with the Bureau of Educational Service. Fourteen per cent of the Fellows and Scholars returned to positions where they had been employed previously with a promotion or increase in rank. Fifty-eight per cent of them were placed in new positions through the recommendation of the Bureau of Educational Service and the recommendation of their major department at Teachers College.

Women who have received awards have been slightly older than the men and have had more experience. The tendency has been greater each year to favor those with more academic preparation and to choose from those who have attended Teachers College.

Applications for Fellowships and Scholarships should be made to the Secretary of Teachers College prior to February 1, 1931, if awards are sought for the academic year 1931-32. All material must be in the hands of the Committee on Fellowships and Scholarships by March 1, 1931. Since the number of applications always greatly exceeds the number of possible awards, only a small percentage of applicants in any given year will receive awards.

DEPARTMENT OF SUPERINTENDENCE MEETING

During the meeting of the Department of Superintendence of the National Education Association at Detroit, in February, the Bureau of Educational Service and the Secretary of Teachers College will have offices in Parlor B, Ballroom Floor, Book-Cadillac Hotel.

TEACHERS COLLEGE DINNER

The annual Teachers College Dinner will be held in the Book-Cadillac Hotel

Ballroom in Detroit, Wednesday, February 25. Tickets for this dinner may be procured from Professor George D. Strayer, Teachers College, Columbia University, at three dollars each.

EDUCATIONAL ADMINISTRATION

The group of men working on the survey of Watertown, Mass., has been divided into six committees, each working under the guidance of a professor in the department. The personnel is as follows: General Organization—Omer Carmichael, E. E. Oertel, and J. A. Lindsay (Professor George D. Strayer); Business Administration—Wm. R. Odell, T. F. Tyler, and R. M. Scott (Professor N. L. Engelhardt); Classification and Progress—J. H. Henderson, Ward A. Shoemaker, and Chas. A. Spacht (Professor Paul R. Mort); Finance—F. Oral Grounds, Y. T. Hoh, F. M. Long, and R. P. Bowles (Professor Carter Alexander); Buildings—J. W. Sahlstrom, Heath E. White, and W. I. Pearman (Professor N. L. Engelhardt); Personnel and Curriculum—Wilbur I. Gooch, John Coulbourn, E. C. Preston, L. R. Quick, and W. S. Grubb (Visiting Professor J. K. Norton).

The committees on General Organization, Business Administration, and Buildings spent the week of November 3 in Watertown. The other three committees, under the guidance of Professors Mort, Alexander, and Norton, devoted the week of November 17 to field work in Watertown.

Professor N. L. Engelhardt participated in the White House Conference on Child Health and Protection held in Washington, D. C., November 19 to 22.

The Battle Hill Junior High School is being erected in White Plains, N. Y., as the result of action taken by the Board of Education November 1. The erection of this school will be of interest to former members of the classes in administration who have studied the population and growth problems of White Plains. This school was planned by Architects Starrett and Van Vleck of New York City, with Professors Strayer and Engelhardt as educational advisers to the Board of Education.

The report on "Health Conditions and the Health Education Program in the Schools of the Panama Canal Zone" has been included in the studies of the White House Conference on Child Health and Protection. This report has been sponsored by Drs. Engelhardt, Carter Alexander, W. S. Elsbree, and H. S. Curtis.

The survey of Holyoke, Mass., has been printed by the school authorities of that city. It is printed in the form and style of the surveys published by the Bureau of Publications.

The Board of Directors of the National Society for the Study of Education has requested Professor Engelhardt to serve as chairman of the committee for the preparation of a Yearbook on School Buildings and Equipment.

The staff in Educational Administration have undertaken the responsibility for selecting and annotating the literature in this field as part of the new Record of Current Educational Publications which will be issued quarterly by the United States Office of Education at Washington. Professor Carter Alexander is the staff coördinator for this work.

Professor Carter Alexander, with the assistance of Mr. E. E. Oertel of the second major course in Educational Administration, has written an article on "Educational Publicity in the United States of America" which is to be published in an early number of the *International Journal of Education*. This is a new international quarterly in education, edited by Professor Friedrich Schneider of Köln, Germany.

Professor Carter Alexander made an address over the Columbia Broadcasting System November 11 as a part of the program of Education Week. It was entitled "The Schools as an Investment."

The Greenwich School Finance Survey which Professor Alexander directed has recently been published by the Bureau of Publications, Teachers College.

Professor Strayer addressed the Arkansas State Education Association, assembled at Little Rock November 13. His subject was "The State's Responsibility for Equalizing Educational Opportunity."

The Administration Club held a meeting at the home of Professor and Mrs. Strayer on the evening of November 8. The discussion was directed by Professor Strayer, with the coöperation of Mr. Everett Preston and Mr. Cecil Scott.

Professor Strayer spent November 24, 25 and 26 in Houston, Texas, visiting the public schools and studying the school system in that city.

Professor Strayer attended the annual meeting of the Texas State Teachers Association November 28. He addressed the general session, the principals' section, and the superintendents' section. He also attended a luncheon of the classroom teachers organization.

Professor Norton attended the meeting of the Yearbook Committee, Department of Classroom Teachers, of the National Education Association, at Chicago October 18, 1930.

Professor Norton addressed the dinner meeting of the Phi Beta Kappa Friday evening, October 31. His topic was, "Leadership in Education."

Professor Mort spoke before the annual meeting of the Department of Superintendence of the South Carolina Teachers Association November 14 and 15 on problems of state school support.

The reading list for those matriculating in educational administration for the doctorate has been revised. Copies may be secured from any member of the department.

The report of the Subcommittee on the School Plant, Its Construction, Equipment, Maintenance, and Sanitation which has been prepared for the White House Conference on Child Health and Protection has been submitted in final form. The committee preparing this report is as follows: Dr. Homer W. Anderson, deputy superintendent, Denver, Colo., Public Schools, Dr. Frederick Archer, deputy superintendent, Louisville, Ky., Public Schools, Dr. W. W. Carpenter, professor of education, University of Missouri, Columbia, Mo., Dr. E. S. Evenden, professor of education, Teachers College, Columbia University, Mr. William B. Featherstone, assistant

in Educational Administration, Teachers College, Columbia University, Dr. H. S. Ganders, Dean of the School of Education, Syracuse University, Syracuse, N. Y., Dr. Frank W. Hart, professor of education, University of California, Berkeley, Calif., Dr. John R. McLure, director of Summer School, University of Alabama, University, Ala., Dr. Elmer T. Peterson, professor of education, University of Iowa, Iowa City, and Dr. N. L. Engelhardt, associate director, Division of Field Studies, Teachers College, Columbia University, chairman. Superintendents of schools in all parts of the country also assisted in the preparation of the report. It is expected that the report will be printed and made available through governmental offices.

ADVISERS OF WOMEN

Professor Sarah M. Sturtevant and Professor Ruth Strang attended the annual meeting of the New York State Association of Deans which convened in Syracuse November 21 and 22. As chairman of the research committee of the Association, Professor Strang submitted a report of the results of a coöperative study made by twenty-seven deans of men and deans of women of the state on the types of guidance problems which come to deans. Problems of educational and vocational guidance, attendance, behavior, health, finance, social adjustments, and personality difficulties were found in varying degrees on all levels: junior high school, senior high school, normal school, and college. Housing and sorority problems were found only in the institutions of higher learning. Discipline cases that come to the dean decrease from 27 per cent in junior high schools to less than 5 per cent in normal schools and colleges.

Professor Sturtevant spoke before the Nursing Institute which was held in Hartford November 5 under the auspices of the Educational Section of the Graduate Nurses Association of Connecticut, on "Problems of Student Guidance, Educational, Social and Professional," and on "Methods of Student Guidance."

Miss Eunice Nelson (A.M., Teachers College), recently dean of women at State Teachers College, California, Pa., is studying in the University of London. She is giving especial attention to sociology and economics, and plans to study also certain phases of the education of women and girls in England and on the Continent.

CURRICULUM

Professor Herbert B. Bruner is acting as consultant to the Houston (Tex.) Board of Education and to the State Department of Education in South Dakota. Programs are also under way in Montgomery and Allegany Counties, Md., and in Pottstown, Pa. Miss C. Mabel Smith, formerly director of curriculum, Houston, Tex., and now associate in curriculum construction, Teachers College, is assisting with the programs in Allegany and Montgomery Counties.

Professor Bruner spoke before the Kansas State Teachers Association at Topeka November 6 on "Some Recent and Predicted Trends in Curriculum Construction in Secondary Schools," and at Hays, Kan., November 7 on "The Place of the Elementary Teacher in Curriculum Making."

Superintendent E. E. Oberholtzer of Houston, Tex., is spending the Winter

Session in Teachers College working on his dissertation which is concerned with problems of the curriculum schools of Houston and the course of study program which has been under way there for the past five years. During this time 254 curriculum bulletins have been produced, six curriculum schools established, and hundreds of units written by teachers in various fields.

Mr. E. C. Giffen, state superintendent of public instruction, and Mrs. Hazel Ott, state director of curriculum construction, have launched what promises to be a very real program of curriculum revision in South Dakota. Several hundred teachers are actually engaged in a coöperative plan to revise the courses of study. Two bulletins have been issued to date. Bulletin No. 1, prepared by members of the executive committee, discusses the various arguments in favor of and against the different approaches to curriculum making, and Bulletin No. 11 describes the place of units in course of study construction.

EDUCATIONAL PSYCHOLOGY

Dr. Arthur I. Gates spoke November 3 before about 400 teachers and supervisors of special classes in New York and vicinity on the topic "Recent Investigations of Teaching Reading to Pupils in Special Classes."

ELEMENTARY EDUCATION

Professor Annie E. Moore addressed the Kindergarten–Primary Section of the New York State Teachers Association at Troy, N. Y., October 24.

Professor Edwin H. Reeder was the guest speaker at the annual dinner of the Barnard Club in Providence, R. I., Saturday evening, November 8. His topic was: "How Much Shall We Tell the Public About Our Profession?"

Dr. Reeder spent the week of November 17 in Donora, Pa., observing the work of the intermediate grades, and in individual and group conferences with the teachers in order to help them improve and strengthen their work.

ENGLISH

Professor Franklin T. Baker and Professor Allan Abbott attended the National Council of the Teachers of English, in Cleveland, November 27-29.

The New York State Committee on the Revision of the State Course of Study in English, of which Professor Abbott is a member, met in Room 217, Teachers College, Friday, October 31. The chairman of the committee, Mr. George W. Norvell, State English Specialist, remained to discuss with members of Education 361P ways in which the class can coöperate with the State Committee.

Miss Clara S. Rhodes, assistant in English, died suddenly from a heart attack Friday evening, October 24, at her home on the Palisades. Miss Rhodes will be deeply regretted, not only by her many friends, but by all who knew her high standards of professional attainment. She had had extended experience in teaching in the Far East, as well as in several colleges of our own South. Memorial services were held at the home of her sister, Mrs. Lewis Smith, of Attleboro, Mass.

FINE ARTS

Professor Sallie B. Tannahill visited schools in Detroit, Toledo, Cleveland, Shaker Heights, Cleveland Heights, and Lakewood October 24 to November 1. She consulted many art teachers and supervisors on the subject of art in the new curriculum and saw much work going on. While in Cleveland she attended the meetings of the Northeastern Ohio Teachers Association.

GEOGRAPHY

Under the leadership of Roland C. Geist, several excursions have been made by members of the Metropolitan Council of Geography Teachers to points of interest in the New York City region.

Mr. DeForest Stull, president of the National Council of Geography Teachers, has completed the program for the annual meeting, to be held at Clark University, Worcester, Mass., December 26 and 27. Several members of the staff of Teachers College will appear on the program.

GUIDANCE AND PERSONNEL

The Teachers College Branch of the National Vocational Guidance Association met October 22 and elected officers for the ensuing year as follows: President, Walter Adams; secretary-treasurer, Doris Jane Woods.

Committees have been appointed for the programs and for the Fourth Annual Vocational Guidance Follies to be given during the Spring Session. Fifty members are enrolled.

Dr. Harry D. Kitson inaugurated a series of twenty-four weekly programs on vocational guidance to be presented by the American School of the Air, beginning October 24. The programs consist of interviews conducted with outstanding representatives of various occupations and are so directed as to give information about these occupations to pupils listening in over the Columbia Broadcasting System.

Dr. Kitson attended the White House Conference on Child Health and Protection in Washington November 19 to 22.

HEALTH AND PHYSICAL EDUCATION

Professor Thomas D. Wood attended a conference of Committee Chairmen in Section III, Education and Training, of the White House Conference on Child Health and Protection, in Washington October 25.

Professor Wood spoke at the opening meeting of the New Haven Physical Education Society November 4 on "The Relationship of the Health Program to the Department of Physical Education in the Work of the Schools." He also addressed the Health Section of the New York Society for Experimental Study of Education at a dinner meeting at the Faculty Club October 24.

Miss Josephine Rathbone, formerly of Wellesley College, is part-time instructor in physical education, giving courses in anatomy and individual gymnastics.

Miss Mary O'Donnell is now part-time instructor in physical education, giving courses in natural dancing. Miss O'Donnell was formerly on the staff of Barnard College.

LINCOLN SCHOOL

Dr. Jesse H. Newlon gave several talks before various sections of the Nebraska State Teachers Association in Lincoln and McCook, Neb., October 30 and 31.

Dr. L. Thomas Hopkins spoke before the Maryland Home Economics Association in Baltimore October 24. His topic was "Prospects for Progress in Home Economics."

Dr. John R. Clark spoke on mathematical topics before state teachers conferences in Pennsylvania and in Maine.

The experimental editions of the *Creative Music for Schools* series by Mrs. Satis N. Coleman, recently issued by the Lincoln School, have served their purpose as an experiment and are now being published by the John Day Company. *The Marimba Book* and *First Steps in Playing and Composing* are already off the press and *The Drum Book* will appear in January.

Mr. H. Emmett Brown spoke October 23 before the Secondary Club of Teachers College on "Scientific Features of the Industrial Life of the City."

The meetings of the Parent-Teacher Recreation Club continue this year on Tuesday evenings from November 11 until March 24. Registrations indicate unabated interest on the part of parents.

MODERN LANGUAGES

Professor E. W. Bagster-Collins has been asked to serve on a commission for the revision of the College Entrance Examination Board's requirements in the modern languages.

MUSIC

Professor P. W. Dykema addressed the Music Study Club of Maplewood, N. J., October 20 on "The Development of the Symphony," and the Music Club of Hastings-on-the-Hudson, N. Y., October 27 on "The Study of Opera."

Professor Alice E. Bivins addressed the music section of the Connecticut State Teachers Association October 24 on "Self Culture through Teaching Music to Children."

Sigma Alpha Iota and Phi Mu Alpha Sinfonia combined in a musicale given in the Grace Dodge Social Room October 29.

During the 1930 Summer Session the K-D Music Tests prepared by Professor Jacob Kwalwasser of Syracuse University, and Professor P. W. Dykema of Teachers College were issued in five double-faced records made by the Victor Company, and the manual, together with scoring sheets, was published by the Carl Fischer Company. In September the C. C. Birchard Company published the Beginning Orchestra Series prepared by Professors N. L. Church and P. W. Dykema.

The weekly music convocations which meet at 12:30 on Wednesdays were inaugurated this year by brief addresses from each member of the music faculty. Mr. Joseph E. Maddy, president of the National High School Orchestra Camp, spoke October 22, and Mr. Raymond

Burrows gave a recital of early pianoforte music October 29. Percy Grainger addressed the group November 19 and that same evening was the honor guest of Phi Mu Alpha Sinfonia.

The Music Education staff tendered a reception and symposium November 20 to the National Federation of Music Clubs whose representatives met for their annual convention in New York City.

NORMAL SCHOOL EDUCATION

Dr. E. S. Evenden participated in a day's conference October 28 with Dr. R. B. Buckingham, chairman of the N. E. A. Committee on the Social and Economic Status of the Teacher, and Dr. J. K. Norton, Dr. Foster, and Mr. Hubbard of the Research Division of the N. E. A., on matters concerning the coördination of the work now being done on the supply and demand of teachers by the N. E. A. and the National Survey of the Education of Teachers.

Dr. Florence B. Stratemeyer spent November 2 to November 13 visiting students in the field in the State Teachers Colleges in Virginia, North and South Carolina. She also filled several speaking engagements at Harrisonburg, Va., and Raleigh, N. C.

Dr. W. C. Bagley addressed the State Teachers Association of Virginia at Richmond November 26.

The Macmillan Company will publish in December a collection of papers of Dr. Bagley, under the title, "Education, Crime, and Social Progress."

NURSING EDUCATION

Professor Elizabeth C. Burgess has recently returned from a visit to several European countries, including England, France, Austria, Poland, Belgium, Germany, Jugo-Slavia, and Switzerland. During this trip she has been in touch with many of the former students of the Nursing Education department who are engaged in administering nursing schools or public health organizations in these countries.

Professor Lillian A. Hudson represented the department of Nursing Education at the American Public Health Association meeting at Fort Worth, Tex., October 27 to 30.

At the general Public Health Nursing section meeting Professor Hudson presented the recommendations of the Education Committee of the National Organization for Public Health Nursing, on the revision of standards for field workers, supervisors, and directors of Public Health Nursing associations for the years 1930 to 1935. These recommendations were endorsed and a copy of the report will be published in an early number of the *American Journal of Public Health* and *The Public Health Nurse*.

Professor Hudson was the guest of honor at a breakfast given by graduates of the Public Health Division of this department. In this group were three directors of Public Health Nursing courses in other universities, the general director, four Division directors and the educational director of the Metropolitan Life Insurance Company, the director of the Public Health Nursing Service of one State Department of Health, and the director of the Bureau of Child Hygiene in one State Department of Health.

Miss Hudson told them briefly about the recent developments in the department. A special message of greeting was sent from the group to Miss M. Adelaide Nutting.

On her return, Professor Hudson stopped in St. Louis to confer with Miss Anna Heisler, director of the Public Health Nursing course in Washington University, and Miss Pearl McIver, state supervisor of Public Health Nurses, regarding their plan for the development of a teaching center for rural nurses in one of the well organized full-time county health units of the State of Missouri.

Professor Isabel M. Stewart attended the Pennsylvania State Nurses' Association meeting in Allentown, Pa., October 30, and spoke on "Some Impressions of Nursing in the Orient."

Miss Mary Ella Chayer attended the meeting of the New York State Nurses' Association held at Syracuse October 22 and 23. Miss Chayer was the speaker and guest of honor at a closed luncheon meeting of school nurses, presided over by Miss Neukom. The topic was "Health Education Aspects of School Nursing." More than one thousand nurses registered for the convention and approximately one hundred and fifty student nurses were in attendance.

PHILOSOPHY OF EDUCATION

Visiting Professor William Boyd, here this academic year from the University of Glasgow, gave an address on his personal philosophy of education before the Philosophy of Education Club meeting October 29. Professor Boyd was also the principal speaker at the last meeting of the Kappa Delta Pi.

Professor W. H. Kilpatrick spoke before the New Jersey Mental Hygiene Association at Atlantic City November 9, and before the faculty of The Hill School, at Pottstown, Pa., November 24.

Professor R. B. Raup addressed the New York State English Teachers Association at Rochester, N. Y., October 31.

RURAL EDUCATION

In the capacity of a member of its Executive Board, Professor Fannie W. Dunn attended a meeting of the Southern Woman's Educational Alliance in Washington, D. C., November 7 and 8. The Alliance has for several years been pursuing a program of research and experimentation in rural communities and schools of several southern states, to discover the specific needs of the rural child for educational and vocational guidance, and to develop guidance plans and programs to meet these needs. The results of these investigations have been published in part in three books by Dr. O. Latham Hatcher, president of the Alliance. The books are: *A Mountain School; Rural Girls in the City for Work;* and *Guiding Rural Boys and Girls.*

The purpose of the Washington meeting was to hear reports of the progress of study during the past year and to consider developments to be undertaken during the coming year.

Professor Dunn attended the White House Conference in Washington, November 20 to 22, as a member of subcommittees of the Committee on the School Child. Miss Margaret Harrison, special investigator of the use of radio in rural schools, was also in attendance.

Professor Mabel Carney is giving an extramural course on rural education for missionaries in the Kennedy School of Missions at Hartford, Conn., November 12 to December 17.

Mr. Fred McCuistion, associate director of the Julius Rosenwald Fund, Nashville, Tenn., returned to the College during the week of November 10-15 for conferences on Negro teacher training with the departments of Rural Education, Teacher Training, and Administration. Mr. McCuistion gave an interesting talk in New York Thursday evening, November 13, before the Negro Education Club of Teachers College.

The Rural Club has organized for the first semester under the leadership of the following officers: President, Henry A. Tape, Ypsilanti, Mich.; vice-president, Robert B. Hudson, Wheeling, W. Va.; secretary, Lois M. Clark, Kalamazoo, Mich.; treasurer, Roger C. Bigford, St. Croix Falls, Wis.; members of the executive committee, Mary S. Sanders, Austin, Tex.; and Helen R. Henderson, Council, Va. At the first meeting of the club, November 18, foreign students in the department furnished the program. A theatre party to "The Green Pastures" was conducted November 21 and a meeting reporting rural phases of the White House Conference is being planned for December 4.

The seminar for Ph.D. candidates in rural education is meeting this year on Friday afternoons from 1:10 to 3 with an enrollment of thirteen students. Other matriculated students out in the field now working on dissertations bring the total of candidates for the higher degree in the department this year to twenty-six.

The experimental work in one-teacher schools in Wilton, Conn., which has been conducted under the supervision of Professor Fannie W. Dunn for several years past, is being brought to a close this year. The schools have been returned to state supervision, but retain privileges of continued coöperation. Miss Effie Bathurst, who served as curriculum adviser in Wilton last year, is collaborating with Professor Dunn in preparing a report with a suggestive organization of curriculum materials for one-teacher schools, which they plan to have ready for publication next summer.

Investigation of the use of radio in rural schools is being continued under the direction of Miss Margaret Harrison. The program for 1930-31 is as follows:

1. Intensive study of the use of radio in the rural situation through use of one four-teacher consolidated school and three one-teacher schools in Wilton, Conn.; through use of a concentrated group of rural schools in New York State; and through use of a few rural schools in New Jersey.
2. Extensive study of the same through written reports from school supervisors and teachers over a considerable area.
3. Continuation of the weekly listing of radio programs, to include more guides for teachers and to be sent to all schools willing to report on their use of programs.
4. Continuation of objective study of the Damrosch radio programs and additional short, objective studies.

5. Emphasis in the study of the use of radio as an aid in the following subjects: music, current events, social sciences, English, and reading.

The outcomes sought during the year include:

1. Evaluation of classroom techniques for utilizing radio noted in 1929-30.
2. Development, in an intensive situation, of fairly inclusive range of classroom units utilizing radio or motivated by radio, on various levels of advancement, in various school subjects, and in various types of learnings.
3. Development of guides for teachers in:
   (*a*) Mechanical control of instrument; installation and use.
   (*b*) School organization and management.
   Adjustment of school schedules, use of radio with and without supervision; group and individual use of radio; cooperative use of instrument by several rooms; and techniques for pupil participation.
   (*c*) Methods and Techniques.
   Adjustment to varying curricula; use in various subject matter fields; home assignments; development of criteria of various types; and development of creative work stimulated by radio interests.
   (*d*) Use of radio in community activities.
4. Encouragement and aid in developing new radio programs especially applicable to rural situations.

A new book by Dr. Edmund deS. Brunner entitled *Industrial Village Churches* has just come from the press. This volume deals not only with churches but with the social, economic, and educational status of the 4,000 villages of industrial type in the United States in which approximately 4,000,000 people are now living. Of the sixty-nine villages surveyed for the study fifteen were textile and thirty-eight mining centers. The volume is published by the Institute of Social and Religious Research, 230 Park Avenue, New York City.

A complete revised directory of all rural directors in the normal schools and teachers colleges of the United States has just been prepared by Professor Mabel Carney. Copies of this directory will be furnished free to former students.

A new course entitled Rural Life in Foreign Lands, for missionaries and foreign students, is being offered this semester for the first time by Dr. Brunner. This, with the companion course, Village Schools in Foreign Lands, which is to be offered by Professor Carney in the Spring Session, will make a year of specialized instruction in the rural foreign field.

SECONDARY EDUCATION

As a result of a shift of the hour of meeting to a time more convenient for students in other departments, the registration for the units of secondary education, 235U-236U, is considerably increased. These units attempt to give students specializing in other fields some acquaintance with the problems and principles of secondary education.

Professor Thomas H. Briggs has spoken this fall before the state teachers associations of Rhode Island, Massachusetts, and North Carolina.

Professor and Mrs. Percival M. Symonds and Professor and Mrs. Grayson N. Kefauver entertained the members of the advanced group of students in Research in Secondary Education at tea Sunday afternoon, November 2, at the Symonds apartment.

Professor Symonds has been elected to the Association of Consulting Psychologists.

Professor Symonds has an article in the October 11 issue of *School and Society* entitled "Group Methods for Conducting a Mental Hygiene Survey of High School Pupils." It is a report of the work in guidance in the high school of Leonia, N. J., during the past year.

The recent announcement of the American School of the Air lists Professor Kefauver as a member of the advisory faculty. He is serving as a member of the committee on vocational guidance.

Professor Kefauver spent the week following November 5 in Washington working on the project of the National Survey of Secondary Education on the horizontal organization of secondary education, which he is directing. Dr. Victor Noll, formerly of the staff of the University of Minnesota, and Mr. Elwood Drake, a former graduate student at Teachers College, are working full time on this project.

Dr. E. K. Fretwell was invited by the State Department of Maine to address the Teachers Associations of Hancock, Washington, and Aroostook Counties November 5, 6, and 7. He spoke before the New Jersey State Junior High School Teachers Association at Atlantic City November 10 on "Homeroom Organization as a Means of Guidance." He spent November 18 in Mount Vernon, N. Y., having been invited by the Mount Vernon Parent-Teacher Association to coöperate and advise in the preparation of a program of education for parents.

The Secondary Club, which formerly held monthly meetings, has grown into a Student Council which meets weekly. The Student Council was organized from class representatives, to coördinate and direct the increasingly numerous and varied activities of members in the Secondary Department. The Council has divided into committees in charge of programs for the Thursday Informals, excursions to places of cultural interest in New York, theaters, sports for men and women, and publicity.

The Thursday Informals, inaugurated by the Secondary Department last year, are being planned by the program committee, Dr. Briggs acting as adviser. Mr. H. Emmet Brown, instructor of mathematics and science at the Lincoln School, spoke October 23 on "Places of Scientific Interest in New York." He gave a very interesting discussion of the new Hudson River Bridge, Holland Tunnel, Museum of Peaceful Arts, and Control of the Subways. On Friday afternoon following, Mr. Brown and a group from the Secondary Department, visited the Museum of Peaceful Arts.

Mr. Lorne W. Barclay, executive director of the Oregon Trail Association, spoke Thursday, October 30, on "The Importance of the Oregon Trail to Our National Development." The westerners served a surprise, "Oregon" Tea.

The Secondary Times, a mimeographed newspaper, appears weekly as a publication of the publicity committee, of which Dr. Fretwell is adviser. The cartoons, drawn by an anonymous artist, have aroused considerable interest and comment. The information reported is planned to help departmental members become better acquainted with each other, with the faculty, and with the educational, social, and recreational opportunities provided at the University and elsewhere in New York City.

Miss Virginia Block, Mr. Milford Franks, and Mr. H. C. Hand, of the research class in secondary education, assisted Professor Symonds in administering a series of questionnaires and rating scales to 250 pupils in the Boys High School, Elizabeth, N. J. These questionnaires and rating scales are the ones described by Professor Symonds in his article, "An Adjustment Survey," reported in the May issue of the *Journal of Educational Research*.

Professor Kefauver has initiated a group of coöperative investigations of problems in secondary school administration. The problems chosen for investigation grew out of a series of conferences with students in his Summer Session course in high school administration who had indicated interest in studying certain of their problems objectively. The majority of the thirty coöperating students chose one of the following three problems: Ability grouping, class size, prediction in guidance. Professor Kefauver, in conference with the students, outlined in detail the procedures in the investigations and is giving further direction by correspondence. A uniform procedure is used whenever feasible, to make possible combination of individual studies into a composite report. University credit will be allowed for those completing their studies. Mr. Hand is assisting in this program.

BUREAU OF EDUCATIONAL SERVICE

Clyde R. Miller, director of the Bureau, recently addressed the faculty and advisory board of Park School, Cleveland; spoke before the staff of the superintendent of schools, Cleveland; and attended sessions of college personnel workers at Oberlin College. As chairman of the program committee, Mr. Miller is arranging the program for the annual meeting of the National Association of Placement and Personnel Officers at Detroit, February 19, 20, and 21.

Sally Caldwell, formerly state supervisor of elementary education in Alabama, is now a member of the Bureau staff and in charge of the desk receiving requests concerning positions in the kindergarten-primary–elementary education field and in critic teaching, methods, supervision, demonstration, and languages. Miss Caldwell takes the place formerly held by Margaret Creighton and temporarily filled last year by Elizabeth Bonner.

The following list continues the changes in positions reported by the Bureau of Educational Service in the October RECORD.

Hamon, Ray L., appointed professor of education, Peabody College, Nashville, Tenn.

McKibbin, Lois, from teacher of English and dramatics, High School, Windom, Minn., to teacher of English and dramatics, Castilleja School, Palo Alto, Calif.

McLain, Helen L., from teacher, Public Schools, Swarthmore, Pa., to principal of Elementary School, Friends School, Baltimore, Md.

McMahon, Alice, from teacher of English, High School, Balboa, Canal Zone, to teacher of English, Public Schools, Scarsdale, N. Y.

Mehlenbacher, Vera, from Washington School, Hornell, N. Y., to kindergarten teacher at the Ethical Culture School, New York City.

Meier, Paul T., from industrial arts instructor, Vincent Smith School, Port Washington, N. Y., to teacher of industrial arts, High School, Bronxville, N. Y.

Meredith, Lucile, from Rockford Street Public School, Mount Airy, N. C., to fifth grade teacher, Wyoming Public School, Millburn, N. J.

Merritt, Mary E. A., from nursery school, Teachers College, Columbia University, to instructor and kindergarten-critic teacher at Temple University, Philadelphia, Pa.

Milavetz, Dorothy, from supervising dietitian, North End Clinic, Detroit, Mich., to supervising dietitian, Grace Hospital, New Haven, Conn.

Miller, Alma, from public schools, Altoona, Pa., to third grade teacher in Public Schools, Millburn, N. J.

Miller, Ethel A., from head of the social sciences department, junior high school, Yakima, Wash., to assistant to consultant in office management, Etna Insurance Company, Hartford, Conn.

Miller, Jessica, appointed assistant psychologist, Horace Mann School, New York City.

Miller, Lynn, to teacher of general science and algebra, Dumont High School, Dumont, N. J.

Milliman, Alice, from normal school, New Paltz, N. Y., to teacher of the upper grades, Scarsdale, N. Y.

Mills, Thelma, from director of dormitory, University of Wyoming, Laramie, Wyo., to dean of women and lecturer in history, Whitman College, Walla Walla, Wash.

Miner, Bess E., from instructor in music, Harveyville High School, Harveyville, Kan., to assistant critic teacher, Indiana University, Bloomington, Ind.

Miner, Louie M., from instructor in English, Hunter College, New York City, to instructor in English, Brooklyn College of the City of New York, Brooklyn, N. Y.

Mitchell, Edith L., from art supervisor, Elementary Schools, Freeport, N. Y., to art supervisor, Moreland School, Shaker Heights, Ohio.

Mitchell, John C., Jr., promoted to principalship of Senior High School, Lakewood, Ohio.

Mode, Katherine, from Wilmington Friends' School, Wilmington, Del., to third grade teacher, Tower Hill School, Wilmington, Del.

Monroe, Day, from teacher of economic and social problems of the family, University of Chicago, Chicago, Ill., to professor of home economics, Cornell University, Ithaca, N. Y.

Moore, Clark D., from principal, Greensburg High School, Greensburg, Ohio, to superintendent of schools, Sharon Center, Medina County, Ohio.

Morales, Elizabeth, from assistant to clothing teacher, Horace Mann School, New York City, to instructor in home economics, State Teachers College, Mansfield, Pa.

Moreland, Eleanor, from social director, Tompkins Hall, Columbia University, to social director, Seth Low Hall, Teachers College, Columbia University.

Morgan, Agnes Lee, from instructor in mathematics, Stamford High School, Stamford, Tex., to teacher of mathematics, Parkersburg High School, Parkersburg, W. Va.

Morgan, W. H., from assistant pastor, Church-in-the-Gardens, Forest Hills, N. Y., to professor of applied religion, University of Iowa School of Religion, Iowa City, Iowa.

Morrill, True C., from superintendent of schools, Newport, N. H., to supervising principal, Park Ridge, N. J.

Morse, Helen Ide, from professor of public school music, State Teachers College, Hays, Kan., to head of music department, State Teachers College, Stroudsburg, Pa.

Morton, Flora E., from head of home economics department, Arcadia University, Wolfville, Nova Scotia, to clothing specialist, extension division, Pennsylvania State College, State College, Pa.

Morton, Marion N., from Winter Park School, Richmond, Va., to first grade teacher at Pelham, N. Y.

Moss, Mary, from State Teachers College, Harrisonburg, Va., to first grade teacher in Public School, Glendale, Ohio.

Munson, S. E., appointed director of research, School District of Lancaster, Lancaster, Pa.

Murphy, Ella, from teacher of English and history, Violet Township School, Pickerington, Ohio, to teacher of English and history, High School, North Lewisburg, Ohio.

Myers, Alonzo F., from director of teacher preparation, Connecticut State Board of Education, Hartford, Conn., to professor of teachers college and normal school education, New York University, New York City.

Myers, Nancy, from St. Mary's College, Dallas, Tex., to French teacher at Union College, Barbourville, Ky.

Nelson, Hazel, in charge of Community School of Faculty Children, Rumeli Hissar, Turkey.

Nelson, Ida L., from director of home economics, Gulf Park College, Gulfport, Miss., to teacher of home economics, John Tarleton Agricultural College, Stephenville, Tex.

Nesom, Mary V., from Louisiana State Normal College, Natchitoches, La., to third and fourth grade critic, Ohio University, Athens, Ohio.

Neulen, Leon N., from superintendent of schools, Champaign, Ill., to director of educational bureau, U. S. Manufacturers of Portable Typewriters, New York City.

Newcomb, Theodore, from assistant professor of psychology, Lehigh University, Bethlehem, Pa., to assistant professor of psychology, Western Reserve University, Cleveland, Ohio.

Nicklas, Victor C., appointed superintendent of schools, Millville, N. J.

Norfolk, Genevieve, from teacher of music, John Adams Junior High School, Santa Monica, Calif., to music instructor, Ohio University, Athens, Ohio.

Norman, Theodore, from director of instrumental music, Public Schools, Boulder, Colo., to instructor in music, Public Schools, New Rochelle, N. Y.

Northfield, S. Marlys, from Greenacres School, Scarsdale, N. Y., to fourth grade teacher at the Allandale School for Boys, Rochester, N. Y.

Norton, Dorothy W., from Garden Country Day School, Jackson Heights, N. Y., to kindergarten critic at State Normal and Training School, Oneonta, N. Y.

Norton, Mrs. Ruth S., from instructor, The Dalton Schools, New York City, to supervisor of practice teaching in physical education, North Carolina College for Women, Greensboro, N. C.

Noyes, Beulah, from director of health, Y. W. C. A., South America, to director of health education, Y. W. C. A., Oklahoma City, Okla.

Oak, Mrs. Lura Sawyer, to associate professor of education, Smith College, Northampton, Mass.

O'Connor, Zena C., from psychologist, The Children's Village, Dobbs Ferry, N. Y., to psychologist, Girls Service League of America, New York City.

Oliver, Jane, to teacher in third grade, Ethical Culture School, New York City.

Olmstead, Rossiter, from head of science staff, Children's School of Science, Woods Hole, Mass., to head of department of science, Kamehameha School, Honolulu, Hawaii.

Olney, Pansy W., from teacher of lip reading to adults, night school, Paterson, N. J., to dietitian and teacher of home economics, South Dakota State School for the Deaf, Sioux Falls, S. D.

Olsen, Louise D., from teacher of English, High School, Aberdeen, Miss., to head of English department, Sunflower Junior College, Moorhead, Miss.

Opsata, F. Virginia, from Battle Creek, Mich., to fourth grade, Prospect Hills Public School, Pelham, N. Y.

Osgood, Margaret, from assembly room teacher, Junior High School, Adrian, Mich., to dean of girls, Junior High School, Richmond, Ind.

Packard, Mrs. Pauline, from Spence School, New York City, to sixth grade teacher at the Woodward School, Brooklyn, N. Y.

Packham, Audrey L., from teacher of education, Washington State Normal School, Bellingham, Wash., to assistant professor of education, Rollins College, Winter Park, Fla.

Page, Helen R., from teacher in the grades, Hollis School, Braintree, Mass., to teacher of English, High School, South Manchester, Conn.

Paine, Olive, from Yale University, New Haven, Conn., to elementary supervisor at Union Free School District, Peekskill, N. Y.

Parker, Beryl, from elementary supervisor, Board of Education, Norfolk, Va., to assistant professor of education, New York University, New York City.

Parker, Paul, from instructor in physical education, Ball State Teachers College, Muncie, Ind., to assistant professor of physical education, Wittenberg College, Springfield, Ohio.

Pate, Mildred, from teacher of English and dramatics, David City High School, David City, Neb., to teacher of English, Cape May Court House, N. J.

Patterson, William W., from head of English Department, Friends School, Brooklyn, N. Y., to assistant master and teacher of English, Lawrenceville School, Lawrenceville, N. J.

Patton, Lucille, from Tennessee Coal, Iron and Railroad School, Ensley, Ala., to critic teacher at Teachers College, Kalamazoo, Mich.

Peach, Helen, from teacher of physical education, Junior High School, Seattle, Wash., to instructor in physical education, Rockford College, Rockford, Ill.

Pease, Ethel G., appointed psychologist, Public Schools, Rochester, N. Y.

Peck, Margaret, from social director, school of nursing, University of Michigan, Ann Arbor, Mich., to student life secretary, University of Texas, Austin, Tex.

Peek, Elma Jane, from Butler School, Springfield, Ill., to first grade teacher at the Edgewood Public School, Scarsdale, N. Y.

Pelz, Irma, from instructor in physical education, Everett Public Schools, Everett, Wash., to instructor in health and physical education, State Normal School, New Haven, Conn.

Penn, Mary R., from instructor in design, Carnegie Institute of Technology, Pittsburgh, Pa., to instructor in fine arts department, Oklahoma Agricultural and Mechanical College, Stillwater, Okla.

Personius, Catherine J., from teacher of home economics, Hampton Institute, Hampton, Va., to instructor in home economics, Cornell University, Ithaca, N. Y.

Peterson, Jennie, from teacher of music, Oregon State Normal, Monmouth, Ore., to supervisor of music, State Normal, La Grande, Ore.

Phelps, Phoebe E., from teacher of history, High School, Whitesboro, N. Y., to teacher of history, Girls' High School, Brooklyn, N. Y.

Phillips, Helene, from teacher of English and civics, Junior High School, Plattsmouth, Neb., to teacher of English and dramatics, High School, Leonia, N. J.

Pierson, Anna Woodward, from director of religious education, Shadyside Presbyterian Church, Pittsburgh, Pa., to teacher of history, The Ellis School, Pittsburgh, Pa.

Pinckney, Pauline, from instructor in fine arts, Southern Methodist University, Dallas, Tex., to instructor in design, Perdue University, Lafayette, Ind.

Plugge, Domis E., from teacher of play production and dramatics, Curry School

of Expression, Boston, Mass., to instructor in speech, Hunter College, New York City.

Poole, Lena Mae, from teacher, Kramer High School, Columbus, Neb., to rural critic teacher, Central State Teachers College, Mount Pleasant, Mich.

Pope, Ruth V., from dean of women, Bates College, Lewiston, Me., to dean of liberal arts, Beaver College for Women, Jenkintown, Pa.

Portenier, Lillian, to assistant professor of psychology, State University, Laramie, Wyo.

Porter, Florence, to kindergarten at Watertown Normal School and Kindergarten, Watertown, Conn.

Porteus, Erma, from teacher of English, High School, Berwick, Pa., to teacher of English, High School, Honesdale, Pa.

Pratt, Marjorie, from instructor, Michigan State Normal College, Ypsilanti, Mich., to curriculum coördinator, Shorewood-Milwaukee Schools, Milwaukee, Wis.

Prentice, Marion H., from teacher of music, Hutchins Junior High School, Detroit, Mich., to supervisor of music, Public Schools, Hempstead, N. Y.

Preston, Kenneth Frank, from principal, Scotia High School, Scotia, N. Y., to principal, Searles High School, Great Barrington, Mass.

Probst, Emilie W., from Nursery School, Day Nurseries, Binghamton, N. Y., to director, nursery school and parental education, Day Nursery and Free Kindergarten Association, Cleveland, Ohio.

Proffer, Illa, from instructor in mathematics, Junior High School, Beaumont, Tex., to instructor in mathematics, High School, Highland Park, N. J.

Pugh, Gerald Gordon, from instructor in industrial arts education, State Teachers College, Macomb, Ill., to business manager of Five Points House of Industry, Happy Valley Colony, Pomona, N. Y.

Rahn, Grant, appointed principal, Junior-Senior High School, Shorewood, Milwaukee, Wis.

Ramage, George, from instructor in mathematics, preparatory school, Milford, Conn., to instructor in mathematics, High School, Linden, N. J.

Ramsay, Jean F., from teacher of English, Emma Willard School, Troy, N. Y., to dean of girls, Mount Ida School, Newton, Mass.

Rauh, Martha, from Mount Vernon play group, Robert Fulton School, Mount Vernon, N. Y., to nursery school director, Recreational Rooms and Settlement, New York City.

Reed, Florence, from teacher of physical education, Public Schools, Hampton, Iowa, to associate in dancing department, University of Washington, Seattle, Wash.

Reigart, Agnes H., to tester in psychological clinic, Cleveland Public Schools, Cleveland, Ohio.

Reynolds, Martha May, from instructor in education, State Teachers College, Buffalo, N. Y., to assistant to the principal, Packer Collegiate Institute, Brooklyn, N. Y.

Rice, Carolyn, from teacher of physical education, Johnson School, Fort Thomas, Ky., to teacher and supervisor of physical education, Mountain Lakes Public Schools, Mountain Lakes, N. J.

Richardson, Charlotte, from instructor in industrial arts, Maryland State Normal School, Towson, Md., to instructor in industrial arts, Washington State Normal School, Bellingham, Wash.

Richmond, Eugene, from instructor in physical education, Seth Low Junior College, New York City, to director of physical education, Public Schools, Berlin, N. H.

Rickards, A. Madge, from grade teacher, Public Schools, Wilmington, Del., to teacher and supervisor of fine and industrial arts, Public Schools, Delaware.

Riedel, F. Atherton, from assistant professor of education, University of Kansas, Lawrence, Kan., to professor

of science, Wilson Teachers College, Washington, D. C.

Riggs, Helen M., from manager of Rosedale Corner House, White Plains, N. Y., to assistant manager, Blue Bowl Cafeteria, New York City.

Robe, Vivian, from instructor in music, Montana State Normal College, Dillon, Mont., to instructor in music education, State Normal School, Fredonia, N. Y.

Roberts, Claudia, from assistant director, health education, Perth Amboy Public Schools, Perth Amboy, N. J., to teacher of physical education, Montclair High School, Montclair, N. J.

Roffers, Clara, from instructor in public school music, East DePere High School, East DePere, Wis., to teacher of music, Rye Country Day School, Rye, N. Y.

Ronnei, Herman L., elected supervising principal, Union Free School District No. 5, Valhalla and White Plains, N. Y.

Root, Frances E., from director of physical education, State Teachers College, Peru, Neb., to associate professor, physical education, University of Idaho, Pocatello, Idaho.

Roseman, Sylvia, from critic teacher, Florida State College, Tallahassee, Fla., to teacher of industrial arts, Grade Schools, Grand Rapids, Mich.

Rosenthal, Doris, from teacher of fine arts, State Teachers College, Upper Montclair, N. J., to teacher of fine arts, Brooklyn Ethical Culture School, Brooklyn, N. Y.

Rosenthal, E. P., from superintendent of schools, Oconto Falls, Wis., to superintendent of schools, Oconomowoc, Wis.

Rowlett, Margaret, from second grade teacher at the Woodward School, Brooklyn, N. Y., to first grade teacher, Public Schools, Scarsdale, N. Y.

Ruane, Claire G., appointed teacher of history, Newton High School, Newtonville, Mass.

Runciman, Doris S., from instructor in home economics, Connecticut College for Women, New London, Conn., to head of home economics department, Mount Allison University, Sackville, N. B., Canada.

Russell, Caroline E., from teacher of music, Public Schools, Edgewater, N. J., to supervisor of music, Public Schools, Essex County, N. J.

Russell, Helen A., from instructor in music, Orthopedic Hospital School, West Haverstraw, N. Y., to instructor in music, University of Delaware, Newark.

Ruttenbur, Paul, from Oak Orchard Grammar School, Medina, N. Y., to eighth grade English teacher, Garden City Public School, Garden City, N. Y.

Ryan, Margaret, from assistant to dean, North Carolina College for Women, Greensboro, N. C., to assistant to dean, St. Lawrence University, Canton, N. Y.

Sackett, Everett B., from assistant director, Junior Division, League of Red Cross Societies, Paris, France, to director of research, Panama Canal Zone.

Saindon, Roy J., appointed principal, Elementary School, City Schools, Patchogue, N. Y.

Salisbury, Elon G., from teacher of mathematics, Baltimore Polytechnic Institute, Baltimore, Md., to associate professor, mathematics education, State Teachers College, California, Pa.

Sanders, J. Edward, appointed assistant professor of secondary education, Colgate University, Hamilton, N. Y.

Sanders, Margaret, from Franklin High School, Highland Park, N. J., to Latin and English instructor at Columbia High School, South Orange, N. J.

Scanlon, Alice, from kindergarten teacher in a private school at Dunham, N. C., to kindergarten teacher in the Public Schools, Millburn, N. J.

Schannenk, M. May, from first grade critic, State Teachers College, Macomb, Ill., to first grade teacher, Lincoln School, Teachers College, New York City.

Scherer, Morgan, to teacher of English and science, Mount Hebron Junior High School, Montclair, N. J.

Schlesinger, Stefanie, to director of kindergarten, Oak Lane Country Day School, Oak Lane, Philadelphia, Pa.

Schweppe, Emma, from director of training, State Normal School, Glassboro, N. J., to assistant superintendent, Public Schools, East Orange, N. J.

Schwesinger, Gladys C., from research worker, eugenics research assistant, New York City, to psychologist, New York State Training School for Girls, Hudson, N. Y.

Scott, Elna P., from Pickering, Mo., to critic teacher at Western Illinois State Teachers College, Macomb, Ill.

Scott, J. E., appointed principal of Junior High School, Peekskill, N. Y.

Scott, Raymond E., to teacher of industrial arts, Hamden Hall, New Haven, Conn.

Scoville, Bernice, from assistant superintendent, Kenosha Public Schools, Kenosha, Wis., to director of research, Clayton Public Schools, St. Louis, Mo.

Segerlindh, Marguerite, to French and Latin teacher, Newtown High School, Newtown, Conn.

Sharman, Jackson R., from state director of physical education, Public Schools, Alabama, to professor of physical education, University of Michigan, Ann Arbor, Mich.

Shaw, Robert W., appointed associate professor of education, Western State College of Colorado, Gunnison, Colo.

Sheehy, Mrs. Emma D., to kindergarten assistant at Horace Mann School, New York City.

Shepherd, Eleanor, from instructor in art, Central Technical School, Toronto, Can., to assistant professor, Wilson College, Chambersburg, Pa.

Shorey, Doris A., from Long Branch Public Grammar School, Long Branch, N. J., to fifth or sixth grade teacher, Public Schools, Mount Vernon, N. Y.

Shortess, George S., from professor of biology, Mount Saint Mary's College, Emmitsburg, Md., to professor of biology, Elizabethtown College, Elizabethtown, Pa.

Siegl, Mrs. May Hollis, from Parker School District, Greenville, S. C., to fourth grade teacher at the Center Academy, Brooklyn, N. Y.

Silence, Zelma, from fourth grade at Shenandoah, Iowa, to fifth grade critic teacher at State Teachers College, Milwaukee, Wis.

Simmonds, Helen F., from teacher of home economics, Junior High School, Pelham, N. Y., to instructor in home economics, Cornell University, Ithaca, N. Y.

Simpson, Helen P., from assistant in art department, Hathaway, Brown School, Cleveland, Ohio, to teacher of art, Public Schools, Grand Rapids, Mich.

Sims, Motta L., from director of home economics, Shaw University, Raleigh, N. C., to director of home economics, Virginia State College, Petersburg, Va.

Smith, Evelyn Field, from fifth and sixth grades at Swarthmore, Pa., to fifth and sixth grade teacher, Fox Meadow School, Scarsdale, N. Y.

Smith, Frances H., from School No. 6, Hackensack, N. J., to transition grade teacher at Scarsdale Union Free School, District No. 1, Scarsdale, N. Y.

Smith, Mabel I., from laboratory technician at the Rockefeller Institute for Medical Research, New York, N. Y., to nursery school critic at Temple University, Philadelphia, Pa.

Smith, Margaret C., from teacher of English and dramatics, High School, Randolph, Neb., to teacher of speech correction, Public Schools, Montclair, N. J.

Smith, Mary N., to teacher of speech, Cortland Normal School, Cortland, N. Y.

Smith, Milton, from instructor in speech, Teachers College, New York City, to head of dramatics department, Sarah Lawrence College, Bronxville, N. Y.

Smith, Virginia B., from Murray State Teachers College, Murray, Ky., to supervisor of French and Latin, New York State College for Teachers, Albany, N. Y.

Snedden, Donald, from assistant professor of psychology, Harvard University, Cambridge, Mass., to associate professor of educational psychology, New York University, New York City.

Snider, Myrtle, from teacher of English and dramatics, San Leandro High School, Oakland, Calif., to teacher of English, Senior High School, Elizabeth, N. J.

Sparling, Edward J., from teacher of social sciences, High School, Palo Alto, Calif., to vocational counselor, Long Island University, Brooklyn, N. Y.

Speacht, Clara M., from fifth grade teacher, Bunker Hill School, Pottsville, Pa., to fourth grade at Longfellow Public School, Mount Vernon, N. Y.

Speer, Catherine L., appointed teacher of English, High School, Okmulgee, Okla.

Spencer, Mary E., from health education specialist, National Catholic Welfare Conference, Washington, D. C., to professor and head of health education department, Marygrove College, Detroit, Mich.

Sproul, Vera E., to supervisor of elementary grades, Norristown, Pa.

Stapler, Anna P. K., from teacher of home economics, Overbrook High School, Overbrook, Philadelphia, Pa., to field service leader in home economics, Dairymen's League, New York City.

Stark, Ida G., from Mamaroneck, N. Y., to supervisor at State Normal, Cortland, N. Y.

Steely, Fred, from teacher at Berlitz School of Languages, New York City, to head of department of social sciences, Paine College, Augusta, Ga.

Stephens, John M., appointed associate in educational psychology, Johns Hopkins University, Baltimore, Md.

Stewart, Jean C., from teacher of English, Hourigan School, New York City, to teacher of English, High School, Ventura, Calif.

Stewart, Martha J., from assistant dietitian, Fifth Avenue Hospital, New York City, to teacher of home economics, State Teachers College, Memphis, Tenn.

Stiebeling, Hazel K., from research assistant in food chemistry, Columbia University, to senior food economist, U. S. Bureau of Home Economics, Department of Agriculture, Washington, D. C.

Stautermann, Georgia E., appointed principal, Public Schools, Scotch Plains, N. J.

Stroh, Margaret, from dean of women, State Normal School, Potsdam, N. Y., to head of English department, Wilson Teachers College, Washington, D. C.

Strong, Leah, from School No. 2, Poughkeepsie, N. Y., to primary teacher, Public Schools, Mount Vernon, N. Y.

Sullivan, John C., appointed instructor in psychology, Western State Teachers College, Kalamazoo, Mich.

Sutherland, Helen T., from manager of cafeteria, Jamaica High School, Jamaica, N. Y., to manager of cafeteria, Haaren High School, New York City.

Sutton, Margaret E., from instructor in art, East Tennessee Teachers College, Johnson City, Tenn., to assistant professor of fine arts, Georgia State College for Women, Milledgeville, Ga.

Swett, Barbara, from teacher of music, North Stratford Schools, North Stratford, N. H., to teacher of music, High School, Seaford, Del.

Swinney, Mary N., from head of commercial department, The Wilkes-Barre Institute, Kingston, Pa., to head of commercial department, Hamilton Township, Trenton, N. J.

Taft, Edna P., from Normal Institute, Albermarle, N. C., to teacher of French at Staples High School, Westport, Conn.

Taft, Ruth C., from teacher of home economics, High School, Stratford, Conn., to teacher of home economics, High School, Hempstead, N. Y.

Tait, Ruth Alderman, from part-time assistant, home economics, Horace Mann School, Teachers College, Columbia University, to teacher of home economics, Junior High School, White Plains, N. Y.

ALUMNI NOTES

TEACHERS COLLEGE ALUMNI ASSOCIATION OFFICERS

President: Dr. J. Cayce Morrison, Assistant Commissioner for Elementary Education, New York State Department of Education, Albany, N. Y.
First Vice-President: Dr. Fannie W. Dunn, Assistant Professor of Education, Teachers College.
Second Vice-President: Dr. Velda C. Bamesberger, Director of Elementary Education, Board of Education, Toledo, Ohio.
Recording Secretary: Miss Mary Lewis, Teacher in Horace Mann School, Teachers College.
Treasurer: Mr. Clyde R. Miller, Director, Bureau of Educational Service, Teachers College.
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Miss Effie Taylor, Professor of Psychiatric Nursing, School of Nursing, Yale University, New Haven, Conn.
Miss Marion Sheridan, 711 Orange Street, New Haven, Conn.
Alumni Trustees:
Dr. J. Cayce Morrison, Assistant Commissioner for Elementary Education, New York State Department of Education, Albany, N. Y.
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Alumni Office: Teachers College, 525 West 120th Street, New York City.

Address all communications to Margaret E. Sober,
General Secretary of Alumni Association, Teachers College, New York City.

Carl W. Lemme (A.M. 1929) is supervising principal of Bosse Elementary School and Chestnut-Walnut School, Evansville, Ind.

Maude Walters (Mrs. Fred C. Walters, B.S. 1924) has just had published by Dodd, Mead & Co., *A Book of Christmas Stories for Children.* The book is illustrated in color and in black and white by Mary Ponton Gardner.

Emily L. Ketcham (M.S. 1926) has been nutritionist for the Bellevue-Yorkville Health Demonstration Center, New York City, since September 1, 1930.

Willard A. Ballou (A.M. 1915) is director of adult education, Junior College of Connecticut, Bridgeport, Conn. He was formerly dean of the State Teachers College, West Chester, Pa.

Mary A. Joslin (B.S. 1924) has been teaching educational psychology in Syracuse City Normal School since 1924.

Reese E. Bert (A.M. 1929) is supervising principal of a school system in Nassau County, L. I.

Robert W. Shaw (A.M. 1926) is teaching philosophy of education and psychology in Western State College of Colorado, Gunnison, Colo.

Alene Ralston (Summer Session 1925-26-27-29-30) in collaboration with Miss Catharine J. Gage (Summer Session 1926-27-29) will publish in January, 1931, through J. B. Lippincott Company, *Present-Day Psychology—An Objective Study in Educational Psychology.* Miss Ralston writes, "This book is divided into three parts: the psychology of the

emotional age; the psychology of learning; the psychology of measurement. It is written in non-technical language and takes no knowledge of psychology for granted on the part of the reader and therefore will be of interest to the layman, to the beginning student in psychology, to the parent, and to the teacher."

Maude L. Van Antwerp (A.M. 1926) is teaching children's literature, primary reading, and technique of instruction in the Northern State Teachers College, Marquette, Mich.

J. Murray Lee (A.M. 1928) is director of research at Burbank, Calif. He and his wife, Doris May Potter Lee (A.M. 1928), have recently published *Maintenance Drills and Tests in Arithmetic* for the seventh and eighth grades, through the Southern California School Depository, Los Angeles.

George G. Heywood (A.M. 1929) is boys' adviser in the Smiley Junior High School, Denver, Colo.

Ana Chladek (A.M. 1928) is substituting this fall for the director of rural education, Teachers College, Kearney, Neb., who is away on leave of absence. Miss Chladek has been teaching psychology at Teachers College, Flagstaff, Ariz., and supervising arithmetic and spelling at the training school connected with the college.

W. R. Chauncey (A.M. 1916) has returned to his position as associate professor of education in Oklahoma Agricultural and Mechanical College, Stillwater, Okla., after a year's sabbatical leave spent at Teachers College, Columbia University.

Walker M. Alderton (A.M. 1926) is director and supervisor of student field activities, Chicago Theological Seminary, Chicago, Ill.

Herman M. Riley (A.M. 1929) has written a Master's thesis, entitled "A History of Negro Elementary Education in Indianapolis, Indiana, with Emphasis on Its Preparation for Citizenship," which appears in the December issue of *The Indiana Magazine of History*, published by Indiana University.

Anna Lowrey (A.M. 1922) attended Summer Session in 1930 at the University of Michigan, Ann Arbor, Mich.

Ernest G. Ham (Summer Session 1927) is superintendent of schools, Springfield, Vt.

Blanche Effie Brown (A.M. 1926) has charge of the organization and direction of the science department of the Wilkes-Barre Institute, Kingston, Pa.

Iva V. Lutz (B.S. 1929) has been appointed primary supervisor at the State Normal School, Bridgewater, Mass.

Charles J. Hoffmann (B.S. 1911) is New York City representative of Scott, Foresman and Co., New York City.

Anna E. Lindberg (A.M. 1926) is head of the English department, Creston High School, Grand Rapids, Mich., and chairman of the English Curriculum Committee for Grand Rapids.

S. P. Walker (Summer Sessions 1926 and 1927) is serving his fourth year as instructor in the department of secondary education, Texas State College for Women, Denton, Tex.

Edgar J. Llewelyn (A.M. 1910) is serving his fourteenth year as superintendent of city schools at Newcastle, Ind.

L. L. Winslow (B.S. 1912) is director of art education, Public Schools, Baltimore, Md.

Helen W. Hastings (A.M. 1928) has been appointed dean in the High School and reader for the College Entrance Board, Middletown, Conn.